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April 9, 2009

HAND DELIVERED TO IVER JOHNSON, DENISE KIRKPATRICK, AND JOSEF WARHANK  
SENT VIA FIRST CLASS MAIL TO LINDA JACOBSON

Re: 2009 Cleaning and Demolition Program and 2009 Interim Measures Work Plan Addendum  
(Work Plan), Asarco East Helena facility, Response to Comment Letters of April 2, 2009

Dear Mr. Johnson and Ms. Jacobson:

Asarco LLC (Asarco) is in receipt of the April 2, 2009 Montana Department of Environmental (Department) and United States Environmental Protection Agency (EPA) comment letters on the 2009 Cleaning and Demolition Program and 2009 Interim Measures Work Plan Addendum (collectively referred to as the Work Plan). The Department and EPA letters were submitted simultaneously and contained identical comments. Asarco has prepared the following responses to the agency's comments. Replacement pages to the Work Plan have been included with this response.

1. **Comment:** *General: The March 13, 2009 cover letter included estimated cost for various 2009 Work Plan tasks. In e-mail dated March 19, 2009 and March 32, 2009 (correct date of March 23, 2009), EPA requested additional details on certain tasks. Asarco provided further estimates in a March 31, 2009 e-mail. Please include an updated cost estimate table with Asarco's response to this comment letter.*

**Response:** Asarco supplemented its March 13, 2009 cover letter cost estimate with additional preliminary cost figures for 1) demolition of the three individual stacks, 2) placement of the CAMU Phase 2 cell temporary cap, and 3) conducting the proposed recordation. Asarco has assembled the following preliminary cost estimate table using standard equipment and performing standard industry means and methods. Please recognize that the finalize Work Plan costs can only be obtained after completing the formal bid process.

<b>Work Plan Tasks</b>	<b>Preliminary Cost Estimates</b>
Demolition of three stacks to include mobilization and demobilization, dust control, debris barriers, security, public access and safety, demolition, waste sizing, waste loading, waste placement (CAMU), temporary liner repair, liner cushion layer placement, and monitoring well repair.	\$940,000
Demolition of Blast Furnace Baghouse Stack, Only	\$260,000
Demolition of Sinter Plant Stack, Only	\$250,000
Demolition of Acid Plant Stack, Only	\$150,000
Maintenance of three stacks (while still in place) to include electrical costs, flashtube replacement, and stack climbing contractor costs.	\$20,000/year
Conduct Historic Survey and Recordation	\$90,000
Weighing and sampling waste to include fieldwork and laboratory analysis.	\$86,800
CAMU operation to include removal of existing liner, load, haul, place and compact waste material, pump and treat leachate collection, and dust suppression.	\$366,600
Demolition footprint sampling to include fieldwork, excavator, and laboratory analysis.	\$17,100
Flow fill grouting to include fieldwork, excavator and materials.	\$12,300
Temporary CAMU Phase 2 Cell cap.	\$215,000
Third party oversight for CAMU Phase 2 cell temporary cap	\$22,000

2. **Comment:** *General: In Asarco's March 13, 2009 letter, two approaches regarding contractors were discussed. Asarco requested a discussion with the Department and EPA on the two approaches. As stated in Iver Johnson's March 19, 2009 e-mail to Asarco, the Department and EPA encourage Asarco to follow the first approach which involves seeking bids.*

**Response:** Asarco has assembled the following schedule involving bid submissions for the Work Plan.

- Asarco submits draft Work Plan to MDEQ and EPA (March 13),
- MDEQ and EPA review and submit comments on the draft Work Plan (April 1),
- Asarco submits revised Work Plan to MDEQ and EPA (April 9),
- MDEQ and EPA approval of revised Work Plan (April 15),
- Asarco transmits approved Work Plan to prospective contractors (April 15 – May 1),
- Asarco conducts the pre-bid walk-through of the project area (May 4),
- Asarco receives bid offers from contractors (May 15),
- Asarco reviews the bid offers (May 15 – May 22),
- Asarco evaluates and selects the best bid (May 25),
- Asarco submits a motion to the bankruptcy court for approval (May 26 - June 22), and
- Asarco execute contract with selected contractor and work commences (June 29).

3. **Comment:** *Page 2-7, Section 2.2.2. Used Oil and Liquid Management: A hazardous waste or used oil determination may need to be made of any oils and liquids removed. This section should be updated to clearly reflect that Asarco may need to manage oils and liquids as hazardous waste or used oil for off-site disposal.*

**Response:** Page 2-7, Section 2.2.2 has been revised to indicate that used oil and liquid waste will be managed appropriately and, if hazardous, will be managed in accordance with applicable rules and regulations.

4. **Comment:** *Page 2-13, Section 2.5, and Page 2-14, Section 2.6: Please provide the Department and EPA with copies of the Stack Demolition Plan and the Community Relations Plan after their approval by Asarco. The Department and EPA would like to receive these documents prior to commencement of cleaning and demolition activities so that we have them on file if needed.*

**Response:** Section 2.5 and Section 2.6 have been revised to indicate that Asarco will submit an approved copy of the SDP and CRP to the Department and EPA prior to commencement of cleaning and demolition activities.

5. **Comment:** *Page 2-15, Section 2.7 NESHAP Permit: Once a contractor is selected, the Department encourages Asarco to recommend that the contractor promptly work with the Department to ensure that the Asbestos NESHAP notification is complete and an asbestos project permit is acquired in a timely manner so as not to delay the demolition and clean-up schedule.*

**Response:** Section 2.7 NESHAP Permit has been revised to include this language.

6. **Comment:** *Page 3-1, Section 3.0 Historic Survey and Recordation: Is the Sinter Stockpile Building listed in this section the same building as listed in Table 1-1, page 1-4 called the "Sinter Stocking Building" that is scheduled for demolition? Please clarify this issue.*

**Response:** The sinter stockpile building and sinter stocking building are the same structure. Table 1-1 has been revised to read sinter stockpile building.

7. **Comment:** *Page 5-1, Section 5.0, Cleaning: Asarco should confer with the Montana SHPO to determine the acceptability of proceeding with the cleaning prior to completion of the recordation. For example, are pictures necessary of the bags in the baghouses?*

**Response:** The text on Page 3-1 and Page 5-1 has been revised to document that the cleaning of certain structures and building features will proceed following consultation of the Montana SHPO.

8. **Comment:** *Pages 5-4, Section 5.1.7, Pump House: Please evaluate if the diesel tank should be cleaned and disposed according to UST/AST regulations.*

**Response:** The text in Section 5.1.7 has been revised to reflect the removal from the demolition area, storage, and re-use of the diesel tank.

9. **Comment:** *Page 5-5, Section 5.1.8, Storm Water Sump: The sludge removed from the active storm water sump is not CAMU-eligible waste. This is an active unit. The sludge should also be added to the list of non-CAMU wastes on page 7-1.*

**Response:** The text on Page 5-5 has been revised to require the contractor to dry the sludge removed from the storm water sump. When generated from the cleaning of the sump, the sludges will be managed appropriately, and, if hazardous, will be managed in accordance with

applicable rules and regulations. The storm water sludge has been added to the list of non-CAMU wastes on Page 7-1.

10. **Comment:** *Page 5-7, Section 5.1.13 Concentrate Storage and Handling Building (CSHB): This section states the following..."the contractor shall wash the interior of the building using a low-volume high-pressure washer." Please explain how the wash water will be captured, i.e. by vacuum or allowed to drain via the storm lines to the wastewater treatment facility. Excess wash water may not be allowed to stand for lengthy periods of time in areas of the CSHB that may have cracks or other pathways to the soil; the Department and EPA want to ensure that further groundwater contamination is minimized.*

**Response:** The contractor will determine the best method for collecting wash water from the affected structures and buildings. The text in Section 5.1 and Section 5.1.13 has been revised to require that the contractor remove the wash water in a timely fashion and at the end of each workday. The contractor will ensure wash water does not stand for lengthy periods in all buildings and structures.

11. **Comment:** *Page 6-6, Section 6.2.11, Miscellaneous Railroad Ties: The railroad ties may be placed in the CAMU following representative sampling and distributed throughout the cell.*

**Response:** Asarco agrees with this comment but believes that Page 9-1 is the appropriate page for this response. The text on page 8-4 indicates that the railroad ties placed in the CAMU Phase 2 Cell will not be piled in one location, but will be spread evenly throughout the CAMU Phase 2 Cell Footprint. The text on Page 9-1 has been revised to indicate that railroad ties will be sampled.

12. **Comment:** *Page 8-1, Section 8.1, Opening CAMU Phase 2 Cell for Waste Placement: The Department and EPA prefer that the existing temporary cap be peeled back with care taken not to tear or contaminate it. The Department and EPA will be requiring a temporary cap at the end of 2009 Work Plan. The Department and EPA will not be approving placement of the final cap this year. Please revise the Work Plan including all appropriate figures.*

**Response:** The text in Section 8.1 has been revised to allow the contractor to use the most cost effective method for carefully removing and replacing the existing liner or properly perforating the existing liner and furnishing a new liner at the end of the 2009 construction season. The contractor will provide (as part of the bid proposal) their selected option. The Work Plan has been updated to reflect the placement of a temporary cover. Appendix C has been removed from the Work Plan to reflect the installation of a temporary liner in 2009. Please remove Appendix C and D from your Work Plan and replace them with the replacement Appendix C.

13. **Comment:** *Page 8-6, Section 8.10, Site Inspections – Operation: Please revise the last sentence, delete "in accordance with 40 CFR 264.303" and replace it with "consistent with the CAMU Cell 2 operating plan".*

**Response:** The text in Section 8.10 has been revised to reflect the suggested language.

14. **Comment:** *Pages 8-7 through 8-9, Sections 8.11 Closing the CAMU Phase 2 Cell, 8.11.1 Cap Composite Liner, 8.11.2 Gas Collection System, 8.11.3 Surface Water Collection and Removal (SWCR) System, and 8.11.4 Cover Systems: These sections should be removed and replaced*

*with a description of the procedures for removal of the temporary cap and placement of a temporary cover over the CAMU at the conclusion of the 2009 CAMU Phase 2 waste placement.*

**Response:** The Work Plan has been updated to reflect the placement of a temporary cover at the end of the 2009 construction season.

15. **Comment:** *Page 8-7, Section 8.11 Closing the CAMU Phase 2 Cell: The Work Plan should clearly state that the CAMU activities and capping will be conducted pursuant to the approved work plan. Asarco must clearly reference in the 2009 Work Plan the approved Design Analysis Report, Asarco East Helena, Corrective Action Management Unit (CAMU) Phase 2 Cell, latest revision July 2008.*

**Response:** The text in Section 8.11 has been revised to clearly reference the approved CAMU Design Analysis Report.

16. **Comment:** *Page 9-1, Section 9.1 Sampling Frequency and Procedures and page 9-2, Table 9-1: Please revise the report to reflect that bagged cleaning wastes and rail ties will need to be sampled.*

**Response:** The text in Section 9.1 has been revised to reflect that all cleaning waste and railroad ties will be subject to the same sampling frequency as demolition waste. Since the quantity of material generated by cleaning activities and the quantity of railroad ties to be hauled to the CAMU Phase 2 Cell is unknown, these items were not added to Table 9-1 as indicated in the revised text.

17. **Comment:** *Page 9-2, Section 9.1 Sampling Frequency and Procedures: Please revise Table 9-1 Material Volumes and Estimated Samples to reflect the corrected volumes pursuant to Asarco's March 27, 2009 e-mail to the Department.*

**Response:** The text in Table 9-1 has been revised.

18. **Comment:** *Page 9-3, Section 9.2, Laboratory Procedures: The parameter list should be amended to include gold.*

**Response:** The parameter list has been amended to include gold (Au).

19. **Comment:** *Page 11-1, Section 11.0, Exposed Soil Sampling: Please add an additional sample location for exposed areas on the northeast corner of the CSHB.*

**Response:** The area under and adjacent to the concentrate storage and handling building (CSHB) ventilation system (northeast corner of the CSHB) is completely covered with concrete. Exposed soils are present outside the Work Plan demolition area in the railroad corridor area just east of the CSHB. If required, soil characterization in the rail corridor area is a task better suited for the Phase 2 RCRA facility investigation.

20. **Comment:** *Page 11-1, Section 11.0, Exposed Soil Sampling: Asarco must submit the soil sampling results and include the laboratory QA/QC information, sample receipt checklist, and*

*chain-of-custody. The work plan should include a date or the name of a standard report for submittal of this information.*

**Response:** The text in section 11.0 has been supplemented to state that soil sampling results will be submitted as part of the 2009 Work Plan Summary Report. The report will be prepared at the conclusion of the 2009 work plan activities.

21. **Comment:** *Page 11-2, Table 11-1 and page 11-3, Section 11.1.1.2. Exposed Soil Subsurface Profile Sample Collection: Duplicate samples should be collected at a frequency of 1 in 10 samples. The final sample should be analyzed for 6010/6020 as well as SPLP. Please amend the text to reflect this.*

**Response:** EPA guidance on duplicate samples collection is 1 in 20. This standard has been applied not just at the East Helena site, but also routinely at numerous EPA and State sites throughout the country. The suggested increase is contrary to standard practices and EPA guidance.

22. **Comment:** *Page 12-1, Section 12.0 Plug and Abandon Underground Utilities: Since the text indicates residual material including sewage may be encountered, please disinfect the lines with a bleach mixture as Asarco did last year.*

**Response:** The text in Section 12.0 has been updated to require bleach be used to disinfect the sanitary sewer lines that are scheduled for plugging and abandoning.

23. **Comment:** *Page 12-2, Section 12.0 Plug and Abandon Underground Utilities: Please explain the statement: "The sump does not need to be abandoned under the State of Montana well abandonment regulations." Is this sump a well? Does it have a sealed bottom? Please include more specifics on its construction.*

**Response:** Upon further examination, the construction status of this sump is unclear. The bottom construction of the sump is uncertain. The sump will be managed as a well and abandoned accordingly. The text has been revised to require that this sump be abandoned according to the State of Montana well abandonment regulations ARM 36.21.670 using cement grout specified under ARM 36.21.675

24. **Comment:** *Page 13-2, Section 13.3. Interim Cap Techniques, Procedures and Material: Asarco proposes using sand bags and/or tethered tires to secure the interim caps. The number of tires should be limited to prevent a future disposal issue when the interim caps are replaced with a final remedy.*

**Response:** Our goal is to apply the best methods for securing the interim cap. We have gain considerable experience in accomplishing this goal through the use of individual and tethered sand bags and tires. Text has been added to Section 13.3 to advise the contractor to limit the use of tethered tires, if they choose to use them.

25. **Comment:** *Page 15-1, Section 15.0, Project Oversight: Asarco will need to retain a third party for oversight of removal and reinstallation of the temporary cap on the CAMU Phase 2 Cell.*

**Response:** The text in Section 15.0 has been revised to reflect this request. The table prepared in response to comment number 1 has been revised with the preliminary cost estimate for this third party oversight.

26. **Comment:** *Page 16-2, Section 16.2 Annual Reporting: The 2009 Work Plan Completion Report should be submitted to both EPA and the Department, since this is a joint work plan.*

**Response:** The text in Section 16.2 has been updated to reflect this request.

27. **Comment:** *Appendix B, Sheet 10: Please amend this sheet to show the areas of newly exposed soils for 2009's work; please exclude or clearly indicate those areas already under temporary caps. Please clearly indicate proposed sample locations in these newly exposed areas.*

**Response:** Sheet 10 has been updated to clearly indicate those areas of newly exposed soils for 2009 Work Plan. All other exposed soil areas were removed from the Sheet.

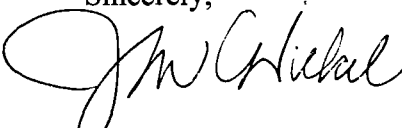
28. **Comment:** *Appendix C, 716.01, Flowable Fill: Please include in the 2009 Work Plan Completion Report the specification for the flow fill material used.*

**Response:** Asarco will obtain the mix design for the Flowable Fill from the contractor and submit it as part of their 2009 Work Plan Summary Report.

The prospective Custodial Trust Agreement (Trust) entitles Asarco to receive credit for work performed at the Asarco East Helena site between February 1, 2009 and the effective date of the Trust. As conveyed in Asarco's February 24, 2009 and March 13, 2009 letters and before proceeding further with the work plan tasks, Asarco seeks written approval from the Department and EPA that preparation and implementation of the 2009 Work Plan qualifies for the credit. Please provide this acknowledgement in the final approval letter.

If you should have any questions regarding this project, please contact me at 227-4529.

Sincerely,



Jon Nickel

Enclosure

cc: Denise Kirkpatrick  
Josef Warhank

**TARGET SHEET**  
**EPA REGION VIII**  
**SUPERFUND DOCUMENT MANAGEMENT SYSTEM**

DOCUMENT NUMBER: 1099529

SITE NAME: EAST HELENA RCRA CORRECTIVE ACTION

DOCUMENT DATE: 04/09/2009

**DOCUMENT NOT SCANNED**

Due to one of the following reasons:

- ☐ PHOTOGRAPHS
- ☐ 3-DIMENSIONAL
- ☐ OVERSIZED
- ☒ AUDIO/VISUAL
- ☐ PERMANENTLY BOUND DOCUMENTS
- ☐ POOR LEGIBILITY
- ☐ OTHER
- ☐ NOT AVAILABLE
- ☐ TYPES OF DOCUMENTS NOT TO BE SCANNED  
(Data Packages, Data Validation, Sampling Data, CBI, Chain of Custody)

DOCUMENT DESCRIPTION:

1 CD - 2009 Cleaning & Demolition Program & 2009 Interim Measures  
Work Plan Addendum



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**2009 CLEANING AND DEMOLITION PROGRAM  
AND  
2009 INTERIM MEASURES WORK PLAN ADDENDUM  
  
ASARCO EAST HELENA PLANT**

Prepared by:  
**Hydrometrics, Inc.**  
3020 Bozeman Avenue  
Helena, MT 59601

**March 2009  
Revised April 2009**

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**2009 CLEANING AND DEMOLITION PROGRAM  
AND  
2009 INTERIM MEASURES WORK PLAN ADDENDUM  
  
ASARCO EAST HELENA PLANT**

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**March 2009  
Revised April 2009**

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TABLE 1-1. PROJECT BUILDINGS AND STRUCTURES

<u>Clean</u>	<u>Clean Prior to Demolition</u>	<u>Demolish</u>
<ul style="list-style-type: none"> <li>○ Hydrogen Peroxide Storage Tanks</li> <li>○ High Grade Building</li> <li>○ Truck Scale</li> <li>○ Locomotive Crane Shed</li> <li>○ Cement and Dust Silos</li> <li>○ Soda Ash and Lime Silo and Coke Hopper</li> <li>○ Pump House</li> <li>○ Storm Water Sump</li> <li>○ Direct Smelt Building</li> <li>○ Coverall Buildings</li> <li>○ Adobe Shed</li> <li>○ Utility Support Towers</li> <li>○ Concentrate Storage and Handling Building</li> </ul>	<ul style="list-style-type: none"> <li>○ Sample Mill and Dust Loadout Baghouse</li> <li>○ Crushing Mill Baghouses</li> <li>○ Sinter Stocking Building Baghouse</li> <li>○ Concentrate Storage and Handling Building Baghouses, Ventilation ductwork, and Stack Base</li> <li>○ Hopto Pad, Storage Bins, and Conveyor Gallery</li> <li>○ Acid Dust Facility</li> <li>○ Groundwater Sump</li> </ul>	<ul style="list-style-type: none"> <li>○ Sample Mill</li> <li>○ Crushing Mill</li> <li>○ Hopto Pad, Storage Bins, and Conveyor Gallery</li> <li>○ Acid Dust Facility</li> <li>○ Sinter Stockpile Building</li> <li>○ Highline Railroad</li> <li>○ Abandoned and New Breaking Floor Buildings</li> <li>○ Groundwater Sump</li> <li>○ CSHB Ventilation System and Stack</li> <li>○ Sinter Plant, Acid Plant, and Blast Furnace Stacks</li> <li>○ Miscellaneous Railroad Ties</li> </ul>

All of the buildings and structures listed in Table 1-1 with the exception of the high grade building, truck scale, pump house, direct smelt building, coverall buildings, adobe shed, and concentrate storage and handling building will be subject to pre-cleaning procedures as further described in Section 4.0 of this Work Plan. Pre-cleaning of these structures will not be necessary since they will continue to be utilized following Work Plan implementation. The buildings and structures highlighted in blue on Sheet 4 (Appendix B) are scheduled for cleaning and are further described in Section 5.0. The removal of hazardous waste from

### **2.2.2 Used Oil and Liquid Management**

The contractor shall identify all equipment located within buildings and structures affected by the Work Plan that may contain used oils or other liquids. The contractor shall locate and coordinate the removal of all such oils and liquids prior to commencing any demolition. The contractor may utilize mechanical (metal or plastic) hand pumps or vacuum devices to facilitate oil and other liquid removal. Hand pumps, if used, shall pump the oil or other liquid directly into 55-gallon drums. Drums shall be located adjacent to the work area during oil or liquid transfer to reduce spillage. Once filled, the drum will be sealed and labeled (Section 7.3) with the type of substance. Absorbent shall be available on-site during oil and liquid removal and transfer as a contingency in case of spillage. Used absorbent shall be placed in a drum labeled "Oily Absorbent". The contractor shall promptly clean up oil and grease spills to prevent contamination of storm water and/or run-off. All storage containers shall be relocated by the contractor to the shop storage building. The contractor shall notify Asarco when such relocations take place. Asarco will be responsible for inspection and management of used oils and liquids once they are placed into storage. Asarco will manage used oils and liquids appropriately and, if hazardous, Asarco will manage this waste in accordance with applicable rules and regulations.

### **2.2.3 Universal Waste (UW) Management**

Universal Waste (UW) items shall require special handling and management. UW items that may be encountered during the implementation of the Work Plan include lamps and mercury containing equipment. UW lamps include fluorescent, high intensity discharge, neon, mercury vapor, high-pressure sodium, and metal halide lamps. UW mercury containing equipment includes thermostats that contain metallic mercury in an enclosed ampule. The contractor shall identify all UW lamps within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such lamps prior to commencing any demolition. The contractor shall ensure that all electrical systems have been de-energized before personnel begin removal of the UW lamps. The plastic cover of the light fixture, if present, will be removed and placed on a secure surface, at which time the exposed UW lamps will be removed by hand and placed in an appropriate container for

storage. The contractor may utilize rolling scaffolding, man lifts, or ladders to support workers on single story floors. For ceilings or outside locations that are of greater height, a motorized boom-lift may be utilized to assist in retrieving UW lamps and other lighting components.

The contractor shall identify all UW mercury containing equipment within or around the buildings and structures affected by the Work Plan. The contractor shall locate and coordinate the removal of all such mercury containing equipment prior to commencing any demolition. Each identified piece of mercury containing equipment designated for removal will be isolated and cleared of all obstructions. Disconnection of the isolated items will proceed utilizing all safety and standard removal procedures for the specific item. Procedures will include lockout/tagout of electrical feed to buildings or areas, cutting electrical lines to the unit, and removing isolated items. The removed mercury containing equipment shall be placed in a 5-gallon spill proof plastic container containing several inches of absorbent media. This media will cushion the ampules during facility transportation as well as absorb any free-flowing mercury if ampules were to break or leak. In case of a spill or release, contractor personnel involved in the removal and handling of mercury containing equipment shall utilize a Mercury Spill Response Kit. All storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of UW placed into storage.

#### **2.2.4 Non-PCB and PCB Light Ballasts Management**

The contractor shall be responsible for identifying and removal of non-PCB and PCB light ballasts prior to commencing demolition. After removal of fluorescent light tubes, the protective ballast cover shall be removed to access the light ballast. The light ballast inspection may be completed with the fixture in place. The inspection of the light ballast shall include careful review of the ballast label to determine if the ballast contains PCBs. If the ballast is not marked "No PCBs" or the label is removed or unreadable, the ballast shall

be assumed to contain PCBs. If the ballast does not contain PCBs, as determined by this definitive visual inspection, the non-PCB ballast will be left in place for demolition.

During removal of the ballast, if any portion of the light fixture is impacted with PCB oil, the portion of the impacted fixture may be decontaminated by scraping the oil from the ballast cover. Any generated residue or wiping clothes will be considered PCB contaminated and incorporated into the drummed ballast waste stream. All PCB storage containers shall be relocated to a designated temporary storage area. Asarco shall be notified when such relocations take place. The contractor should anticipate using the shop storage building for the storage of mercury containing equipment. Asarco will be responsible for inspection and management of the PCB items placed into storage.

### **2.2.5 Refrigerant (Freon) Management**

Under the 2007 Cleaning and Demolition Work Plan, air conditioning Freon from heating and cooling units within the inactive buildings and structures at the East Helena facility was removed. These heating and cooling units have been marked with a painted yellow stripe. The contractor shall be responsible for identifying and removal of any Freon from remaining building and structures prior to commencing demolition. The Freon containing equipment shall be disconnected utilizing the proper safety and standard removal procedures and evacuated. Air conditioners and chillers shall be disconnected from their power sources. The contractor shall utilize a certified refrigerant recovery subcontractor to facilitate evacuation and recovery of the refrigerant. The contractor shall document on an internal removal log, the quantity in pounds of Freon recovered from the various units. Asarco shall be provided with a copy of the log. Once the unit is cleared, the unit shall will be tagged with an agreed upon colored tag indicating "Freon Removed." The contractor will be responsible for arranging for the recycling of the removed Freon.

### **2.3 RECYCLABLE MATERIAL PLAN (RMP)**

During the demolition phase of the Work Plan, the contractor will likely encounter certain materials or equipment (scrap steel, copper, motors, pumps...) that may be recycled. Asarco

encourages the recycling and recovery of these valuable material assets. The contractor shall develop a Recycling Material Plan (RMP) for review and approval by Asarco. The plan shall include a description of the types of recycle material that the contractor considers valuable. The techniques for segregating recyclable material from waste (including decontamination procedures), manner for transporting to the recycling facility, tracking of recyclable material, and inspection procedures shall be included in the RMP. The contractor shall establish recyclable material staging and loading areas. These areas shall be easily accessible to expedite loading and transport activities. Surface cover in these areas shall be durable enough to withstand the storage and movement of heavy scrap material without breaking apart and creating difficulties when loading the material or impacting the areas. The contractor shall provide records to Asarco that indicate the manner in which recyclable material is managed, handled, or treated for recovery or recycling that demonstrates its value. The contractor shall submit 1) acceptance criteria required by the receiving facility (expressed as a minimum threshold of recoverable metals and maximum allowable toxic metals), 2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, 3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, and 4) the name of the state or provincial regulatory contact and facility contact.

## **2.4 DUST CONTROL PLAN (DCP)**

The contractor shall develop a Dust Control Plan (DCP) for review and approval by Asarco. The general requirements of this plan shall be to provide adequate resources to control dust and to detail the means and methods that shall be utilized to implement dust control measures during Work Plan activities. The contractor's dust control measures shall be designed to control the emission of visible fugitive nuisance dust. These controls shall be accomplished through the use of administrative, engineering, and physical controls that shall include, but not be limited to:

- Moistening surfaces with water,
- Applying dust suppressants or encapsulates, where applicable,

- Minimizing soil, road, and surface disturbances,
- Minimizing dust exposure periods and wind erosion before dust-abatement measures are applied,
- Utilizing a vacuum sweeper to remove road dust spillage,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Controlling vehicle and equipment speeds (10 MPH maximum),
- Restricting traffic to designated roads and corridors, and
- Selecting appropriate equipment.

The contractor shall utilize an overall dust control application program that shall include, but not limited to:

- Providing dust suppression (water) before, during, and after demolition of a structure,
- Moistening the targeted drop area prior to the demolition of the structure,
- Installing protective barriers to minimize debris shrapnel during demolition of structures,
- Providing dust control during material sizing and loading operations,
- Controlling material drop heights during loading, unloading and material transfer operations,
- Minimizing and controlling material handling operations,
- Controlling on-site vehicular traffic and performing haul road maintenance, and
- Applying other approved methods for control of dust during specific procedures.

The contractor shall consider the mitigation of airborne dust generation a priority. Throughout the project, the contractor shall execute all necessary steps to effectively control dust in the working area during Work Plan activities. Asarco reserves the right to stop all work if Asarco personnel or the Asarco engineering consultant believe the contractor is not meeting the obligations of their DCP. The contractor shall remove at ground level and at all accessible areas all gross debris accumulation that could be a source of airborne dust. Prior

to demolition, the contractor shall institute a program of pre-wetting and moistening building interiors and horizontal surfaces where dust has accumulated. This pre-wetting of the structure interiors will minimize remaining dust from becoming airborne during the demolition process. Dust that may fall to the ground shall be gathered, containerized, and properly managed.

The contractor shall utilize water trucks, misting systems, and all other appropriate equipment (i.e. manlifts) to keep debris moist during the demolition and loading process. The DCP shall outline the dust control measures during stack demolition, including the prohibition of stack demolition if wind conditions exceed 5 mph. All transport vehicles shall be limited to a maximum 10 miles per hour while both on-site and during transport. Limiting speeds shall prevent dust from become airborne during transport and shall reduce the kick-up of dust from rolling tire action.

The contractor shall ensure that transport of waste on-site occurs on prescribed paths, which will be determined during the course of demolition. The changing nature of the site as demolition of structures progress may dictate the modifications of haul routes. Once defined, these haul routes shall be enforced to create dedicated routes that can be maintained to mitigate dust and debris migration and prevent any potential spread of contamination. The contractor shall be responsible for maintenance of haul routes through routine daily inspection to ensure that debris is not being released. The Contractor shall promptly address all deviations encountered during daily inspections.

The contractor shall lightly dampen haul routes with a water truck on a frequency to prevent the generation of dust. The facility's air quality permit requires the use of dust suppression methods, including the use of water, to meet this obligation. The use of water as a dust suppression shall be managed to minimize infiltration. The temperatures and relative humidity experienced during the construction season will promote evaporation of the water used for dust suppression rather than infiltration. Street sweepers or a vacuum truck shall be used on plant site and waste transport haul roads. Water dust suppression can augment the

constant use of street sweepers or vacuum trucks. The contractor shall utilize the services of a street sweeper to clean the haul routes of accumulated debris and dust. This debris and dust sweepings will be hauled to the CAMU Phase 2 Cell.

Haul roads within the plant site and haul roads used for waste transport will need to be kept clean at all times. A street sweeper designated to cleaning roads and surfaces within the plant site will clean all loose dust in order to minimize the chances for the off-site migration of dust and debris. This street sweeper will not be used off site of the plant. A second street sweeper designated to keeping CAMU Phase 2 Cell haul roads clean will be run constantly when waste is being hauled. Haul roads at the CAMU Phase 2 Cell have been paved so that waste and debris can easily be cleaned. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell. The DCP shall also address a plan for the application of a dust suppressant or binder on waste in the CAMU Phase 2 Cell. The application of a dust suppressant or binder may be necessary if fugitive dust emissions from the CAMU Phase 2 Cell occur, or the CAMU Phase 2 Cell is left open for an extended period of time due to construction or demolition delays.

The DCP shall indicate that the existing Asarco provided fill station, adjacent to Upper Lake, be utilized as the main source of non-potable water for dust suppression operations. The fill station water source used for dust suppression is Upper Lake.

The contractor project staff (i.e., project superintendent, foremen, H&SP) shall inspect work areas daily to assess the need for implementation (or additional implementation) of dust control measures. The contractor shall include inspection procedures and recordation within the DCP.



## 2.5 STACK DEMOLITION PLAN (SDP)

The contractor shall develop a Stack Demolition Plan (SDP) for review and approval by Asarco. Asarco will submit an approved copy of the SDP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. The SDP shall describe the means and methods for demolition of the blast furnace, sinter plant, acid plant, and concentrate storage and handling building stacks. The SDP shall include stack demolition procedures and protocol, worker and public health and safety measures, and actions that shall be taken to control the emission of dust, as further detailed in the DCP. The contractor shall be responsible for coordination of stack demolition activities with other Asarco contractors, the Asarco engineering consultant, and the Federal Aviation Administration (FAA).

The SDP shall ensure that all demolition debris is contained within the Asarco East Helena facility. No stack debris, regardless of size, shall cross the fence line or the boundary into Upper Lake or Lower Lake. The SDP shall contain protocol to protect existing structures, existing wells, and the existing interim temporary cover system.

The SDP shall contain provisions for conducting a pre-blast survey by an independent firm hired by the contractor to verify that the surrounding structures are not affected by the demolition (blast) activities. Seismographs shall be placed at various locations surrounding the blast site to verify that blast vibration does not exceed prescribed values. The estimated peak particle velocity should be less than 0.25 inches/ second at a 500-foot radius from the stacks. The initiation system shall be a non-electric system to provide a higher factor of safety and eliminate premature detonation by lightning or radio interference.

The contractor shall establish a secure area around the site. All site security shall be coordinated between Asarco, the contractor, and the local authorities. The SDP and Community Relations Plan (Section 2.6) shall identify all lines of communication between local authorities and the contractor prior to stack demolition.

## **2.6 COMMUNITY RELATIONS PLAN (CRP)**

The contractor shall develop a Community Relations Plan (CRP) for review and approval by Asarco. Asarco will submit an approved copy of the CRP to the MDEQ and EPA for their records prior to commencement of cleaning and demolition activities. At a minimum, the CRP shall specify the manner for notifying, communicating, and securing the site with Asarco, MDEQ, EPA, local law enforcement authorities, the city of East Helena, Lewis and Clark County, media, and the local community throughout demolition activities.

## **2.7 NESHAP PERMIT**

The contractor shall obtain the applicable National Emissions Standard for Hazardous Air Pollutants (NESHAP) Permit. This permit is required for both asbestos abatement activities and demolition activities. The contractor shall communicate directly with the MDEQ to obtain the permit and shall present the executed permit to Asarco prior to mobilization. Asarco recommends that the contractor promptly work with the MDEQ to ensure that the Asbestos NESHAP notification is complete and an asbestos project permit is acquired in a timely manner so as not to delay the demolition and clean-up schedule.

## **2.8 CONSTRUCTION SCHEDULE**

The contractor shall prepare a detailed construction schedule that includes, at a minimum, durations and milestones for Work Plan activities. The schedule shall provide sufficient detail to define the path of the project and include time for delays from inclement weather. Throughout the project, the schedule shall be regularly updated to reflect current conditions. The contractor will provide all schedules to Asarco, the MDEQ, and EPA.

## **2.9 STORM WATER CONTAINMENT, RUN-OFF PATTERNS, AND WATER MANAGEMENT**

The contractor should rely upon the Asarco East Helena facility's existing Storm Water Prevention Plan (SWPPP) for this scope of work. This SWPPP describes storm water prevention procedures to be utilized during the Work Plan. In general, facility storm water runoff is routed to the internal plant water handling system. Storm water and run-off will be

directed to the High Density Sludge (HDS) water treatment facility (WTF) to be operated by Asarco personnel. The contractor will be responsible for the separation of solids and liquids from all water used by the contractor during the implementation of this Work Plan. The contractor will need to remove solids from water reporting to the WTF, dry solids, and place dry solids in the CAMU Phase 2 Cell.

In areas where cleaning and/or demolition could potentially create runoff, the contractor shall protect the drains as necessary to prevent contaminants from entering the system. This protection shall consist of a combination of sand bags, hay bales, and filter fabric strategically placed to remove the solids while allowing the storm water and/or run-off to continue to the existing storm water containment and treatment system. The contractor shall ensure storm water and run-off is free of grease and oils by utilizing methods to prevent and promptly clean any oil and grease spills. The contractor will be responsible for ensuring that the existing storm water containment and treatment system is not impaired and in proper working order upon completion of Work Plan activities.

The contractor shall utilize Best Management Practices (BMPs) throughout the Work Plan implementation. From the existing SWPPP, applicable information, such as management practices for the hazardous material storage areas, shall be incorporated into the contractor's Best Management Practices. Other material handling practices related specifically to the decontamination and demolition activities shall be addressed. Management practices for cross-contamination control shall be addressed, such as avoiding spills from construction vehicles during hauling, loading, servicing, and fueling and controlling contaminated soil erosion. Any changes to the storm drainage system due to demolition will be addressed as the structures are demolished and the site conditions change.

Standard erosion control measures shall be utilized, including controlling dust, providing straw bales around storm drain inlets, placing sand-bags at critical perimeter locations, and avoiding off-site tracking of debris from vehicles. Provisions to avoid ponding and maintain excavations free of storm water runoff shall be addressed. Typically, this will involve filling

these locations prior to storms. Measures for erosion control shall be added as the project progresses.

The contractor shall perform inspection of the erosion control measures prior to, during, and after storms to evaluate the adequacy of these measures and to manage corrections as necessary. Documentation of the inspection and correction activities shall be maintained, as required. Generally, the contractor's project manager or engineer shall perform the inspection and documentation. Copies of the documentation shall be forwarded to Asarco for review and record retention.

Existing collection trenches and sumps shall be used to collect surface water during Work Plan implementation. The locations of these trenches and sumps will be confirmed and identified by the contractor, utilizing existing project utility plans and plant engineering drawings, during the pre-mobilization activities as well as throughout the completion of Work Plan. During collection of surface water, water will be directed to Asarco's WTF for treatment. Asarco shall manage all collected surface water run-off in the WTF. Asarco shall be responsible for any required water treatment, waste management, and disposal permits associated with the WTF. The contractor shall be responsible for maintaining and cleaning existing storm water collection trenches and sumps.

The conveyance systems used to collect project decontamination water will include, but not limited to those features generally located in the vicinity of Asarco's wastewater treatment and the on-site car wash facilities. The East Helena Plant WTF treats facility water and discharges the treated water under Asarco's MPDES permit. The sludges that collect in sumps, defined as wastewater treatment units (40 CFR 260.10), are exempt from RCRA permitting. When generated by removal from the sumps, the sludges will be managed appropriately and, if hazardous, will be managed in accordance with applicable rules and regulations.

Asarco's current MPDES permit, March 2001 MPDES permit renewal application, and April 2007 update to its March 2001 MPDES permit renewal application (MDEQ action pending) list Upper Lake and City of East Helena water as operations contributing flow to Asarco's WTF effluent, both of which may be used for decontamination of project equipment. The MPDES permit allowed for the treatment of decontamination equipment wash water during plant operations. The MPDES permit provides for this same treatment during the cleaning and demolition activities.

## **2.10 SITE SECURITY**

The contractor shall establish a site security plan for review and approval by Asarco. The contractor shall be responsible for all facets of site security during implementation of the Work Plan. The facility is currently surrounded by security fencing or structures, which will prevent unauthorized personnel access to the site. The contractor shall establish work hours in consultation with Asarco. The contractor shall follow sign-in procedures and check in at the main facility gate or another gate/entrance specified. The contractor shall control access to work areas during operating hours through the monitoring of a single ingress/egress location with mandatory sign-in procedures for all contractor personnel. During off-hours, sensitive work areas (open ditches, channels, and holes) shall be cordoned off with temporary barricades, delineators and caution tape. The contractor shall coordinate with community leaders, local authorities, law enforcement officials, and private owners to restrict public access to the facility during all phases of the Work Plan. The contractor may be required to close public right-of ways, county roads, and rail corridors; establish exclusion zones; and control public and media viewing.

## **2.11 ADMINISTRATIVE, STAGING, AND DECONTAMINATION FACILITIES**

The contractor shall establish and utilize temporary facilities and construction control procedures throughout the Work Plan. Asarco will make available, and the contractor will maintain, temporary office space to coordinate field construction activities. The contractor shall provide adequate sanitary facilities, fences, barricades and scaffolding. Storage for tools, light equipment and appropriate signs shall be established, as needed, for this project.

Temporary services shall be coordinated with Asarco for Work Plan activities and site traffic. Safety shall be managed, including the monitoring of vehicular and pedestrian traffic and public safety, as needed.

The contractor shall establish work zones during pre-mobilization planning. In general, this planning shall include:

- Lead and decontamination exclusion areas,
- ACM removal areas,
- Equipment staging areas,
- Personnel decontamination areas,
- Storage areas,
- Demolition and material salvage areas,
- Loading areas and staging of off-site waste, and
- Field office and support areas.

## **2.12 GENERAL CONSTRUCTION PERMITTING**

The following list identifies the applicable permits and/or notification that may be obtained or the agencies that may need to be notified by the contractor prior to the initiation of any fieldwork.

- Montana Department of Environmental Quality (MDEQ).
- Environmental Protection Agency (EPA).
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Asbestos Abatement.
- Division of Occupational Safety and Health (OSHA) Department of Industrial Relations - Notification of Demolition Activity S-691.
- Montana Rail Link.
- Lewis and Clark County Sheriff.
- City of East Helena Police Department.
- Montana Highway Patrol.

### **2.13 PRE-CONSTRUCTION MEETING**

Following the completion of the pre-construction contractor tasks outlined above, a pre-construction meeting shall be held at the facility or other location designated by Asarco. The purpose of the meeting will be to discuss the scope of work and the roles of the parties involved. Details regarding the date that fieldwork will be initiated, site access requirements, hours of operation, deliverables required by Asarco, and locations of construction equipment, staging and cleaning areas should be discussed. Participants in the meeting shall include the Asarco project team, Asarco's engineering consultant project team, the contractor's project team, the MDEQ, and EPA.

### **2.14 MOBILIZATION**

Following the pre-construction meeting, work areas shall be secured and a central field office shall be established. Equipment and materials necessary to complete the project shall be moved to the facility and staged at predetermined locations within the facility. In addition to the field office, the following work areas shall be established:

- Establishment of on-site electric and water service (as needed),
- Personnel decontamination areas,
- Temporary conveyance systems,
- Equipment lay down areas, and
- Demolition salvage staging and loading areas.

The contractor shall establish personnel decontamination areas for each exclusion zone and work activities that may expose workers to unique safety hazards and/or hazardous levels of chemicals and waste materials. These requirements shall be used to determine appropriate personnel protective equipment (PPE) that will be used in each of the separate plant areas during each phase of work. Required PPE, decontamination procedures, and personnel decontamination equipment shall be identified in the contractors HSP and HMAP.

### 3.0 HISTORIC SURVEY AND RECORDATION

Asarco shall contract an engineering consultant to conduct historic recordation of the demolition structures and buildings identified in the Work Plan. The proposed demolition focuses twelve structures with associated features anticipated to be impacted by the project. The cleaning of specific structures or building features (such as baghouse bags or pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA. In addition, no demolition activities will commence on structures listed in the section until the photographic documentation is complete and notice to proceed is received by MDEQ and EPA. In conjunction with EPA, the Montana State Historic Preservation Office (SHPO), and MDEQ, Asarco's engineering consultant shall define the requirements for historic recordation of the twelve structures and associated features. These obligations are:

- Provide a plan map of the facility indicating photograph numbers, photograph locations, and cardinal directions of each photograph taken.
- Provide photographs and a photographic log of each structure.
- Provide drawings and plans for each structure.
- Provide video documentation of the demolition of the three stacks.
- Provide a context narrative,.
- Provide Cultural Resources Information System (CRIS) Forms.
- Provide archival quality 5 by 7 inch prints and photograph log of each structure.



## 5.0 CLEANING

The contractor is responsible for conducting all facets of the cleaning process. In most cases, the building and structures identified in the Work Plan have been utilized to store process material. The intent of the cleaning task prescribed in the Work Plan is twofold. First, the cleaning of building and structures that will not be demolished shall eliminate the presence of process material. The removal of hazardous waste from these building and structures will be deemed complete when no process materials are visible, as determined by MDEQ representatives. Second, the cleaning of buildings and structures scheduled for demolition shall reduce the potential for fugitive emissions during demolition activities. The contractor shall implement all necessary precautions, which shall be addressed in the contractor's HSP and DCP when working with and handling process material. The buildings and structures identified for cleaning are delineated on Sheet 4 and Sheet 5 in Appendix B. The cleaning activities may commence prior to conducting the historic survey and recordation phase of the Work Plan providing that these activities do not compromise the building or structure integrity. However, the cleaning of specific structures and building features (such as baghouse bags and pump house equipment removal) will proceed following consultation with the Montana State Historic Preservation Officer and notice to proceed is received by MDEQ and EPA.

### 5.1 CLEANING OF BUILDINGS AND STRUCTURES NOT SCHEDULED FOR DEMOLITION

The cleaning of buildings and structures not scheduled for demolition are shown on Sheet 4 in Appendix B. The cleaning of buildings and structures that will not be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Remove bulk materials,
- Conduct vacuum cleaning,

- Place vacuum solids in sealed containers,
- Haul all containers to CAMU Phase 2 Cell,
- Wash down identified work area,
- Manage wash down water within identified work area, and
- Haul dried solids to CAMU Phase 2 Cell.

Work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of initial, bulk solids. The goal of this task will be to remove the gross, dry accumulation of process material at all areas within the identified structure or building. In certain structures and buildings, the contractor should anticipate using chipping, grinding, and jack hammering equipment to remove hardened, adhered, or fused materials. The bulk material collected using these techniques shall be placed into haul trucks, weighed, sampled, and transported to the CAMU Phase 2 Cell. An industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using the vacuuming procedures and removed baghouse bags shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The contractor will be responsible for coordination of these activities with the Asarco engineering consultant.

The buildings and structures not scheduled for demolition shall require supplemental cleaning using low-volume, high-pressure washers. Upon completion of the gross process material removal and vacuuming of floors, walls, ceilings, and tank interiors, the contractor shall pressure wash all interior surfaces using low-volume, high-pressure washers. The contractor shall be responsible for removing all process material and cleaning these structures to the satisfaction of Asarco and MDEQ to ensure that no process material is visible. The contractor shall control the use and contain the presence of wash down water to the building, structure, or tank interior. The contractor shall augment the evaporation or absorption of wash down water and enhance the separation of solids to minimize their impact to Asarco's WTF. Any tank cleaning water or excess water not evaporated or absorbed shall be collected

by the contractor (i.e. by vacuum) and routed to Asarco's WTF. Excess water shall not be allowed to stand for lengthy periods of time and must be completely collected by the contractor by the end of each workday. Water will not be allowed to collect in areas where there are obvious cracks in concrete or other pathways to soil. The specific cleaning procedures for building, structures, and tanks that are not scheduled for demolition is discussed below.

#### **5.1.1 Hydrogen Peroxide Tanks**

Two aluminum tanks, each having the capacity of 13,000 gallons, were used to store 50 percent hydrogen peroxide. The last of the hydrogen peroxide was drained from these tanks in July 2007. Bulk solids removal within these storage tanks will not be necessary. The contractor shall wash the interior of these tanks using a low-volume, high-pressure washer.

#### **5.1.2 High-Grade Building**

The high-grade building stored and processed high-grade material (containing appreciable amounts of precious metals) within a secured and gated facility. The high-grade material generally arrived in sealed containers or drums. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall vacuum clean the interior and surrounding area of the high-grade building to remove all visible process material. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

#### **5.1.3 Truck Scale**

The truck scale continues to be used to weigh incoming material that enters the facility and outgoing material that leaves the facility. The contractor shall anticipate nominal bulk solids removal from under the scale. The contractor shall vacuum clean the areas under and surrounding the truck scale to remove all visible process material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the surrounding

area using a low-volume, high-pressure washer. To maximize cleaning efforts, the contractor shall schedule the cleaning of the truck scale near the end of the Work Plan activities.

#### **5.1.4 Locomotive Crane Shed**

The locomotive crane shed garaged the diesel electric crane and was used sparingly to store containerized process material. Bulk process material was not stored within the crane shed. Lime rock was placed around the exterior of this building to act as a run-on diversion berm. This building may have a partial dirt floor. The contractor shall remove all lime rock around the exterior of the building. The contractor shall remove the lime rock fill from the maintenance pits. The contractor shall remove all debris inside and surrounding the building and vacuum clean the interior of the building's floor, walls, and ceiling to remove all visible material. Once all bulk solids are removed and the entire area is vacuum cleaned, the contractor shall wash the building interior using a low-volume, high-pressure washer. The RPE liner material located inside the building shall be sized to be no greater than 6ft by 6ft sheets before being placed in the CAMU Phase 2 Cell. The contractor will place sized RPE material in the CAMU Phase 2 Cell at the direction of Asarco's engineering consultant.

#### **5.1.5 Cement and Dust Silos and Coke Hopper**

The two enclosed silos were used to store cement and baghouse dust prior to these materials being placed into mixing agglomerators and the coke hopper was used to feed the previously demolished coke transfer belt. The silos and coke hopper have been previously cleaned so the contractor shall anticipate minimal bulk solids removal from these structures and the surrounding area. Small bin ventilation baghouses are located on the top of each silo. The contractor shall remove all bags from the baghouses and vacuum clean the baghouse interiors. The contractor shall wash the interior of the baghouses, silos, and coke hopper using a low-volume, high-pressure washer.

#### **5.1.6 Soda Ash and Lime Silo**

The enclosed silos stored soda ash and lime, which were once used as reagents in the Asarco's WTF. A small bin ventilation baghouses are located on the top of the silos. The

contractor shall remove all bags from the baghouse and vacuum clean the baghouse and silo interior as well as the surrounding area. The contractor shall wash the interior of the baghouses and silos using a low-volume, high-pressure washer.

#### **5.1.7 Pump House**

The pump house contains pumps that previously provided water for 1) fire protection and process usage at the facility and 2) the closed circuit blast furnace cooling system. The building also contains an electrical storage room and an empty diesel tank. The contractor will remove all debris in and around the building, vacuum clean the interior of the building's floor, walls, and ceiling, and relocate the diesel tank to an area specified by Asarco for re-use. The contractor shall wash the interior of the pump house using a low-volume, high-pressure washer. The contractor shall be careful not to damage the water transfer line entering and exiting the building.

#### **5.1.8 Storm Water Sump**

The active sump collects storm water and routes it through an underground line to Thornock tank. The contractor will remove the lid on the sump and vacuum clean the interior of the sump to remove all sludge and clean the area surrounding the sump. Removed sludge is not eligible for the CAMU. The contractor shall dry the sludge removed from the storm water sump. Asarco will manage the sludge removed from the sump appropriately, and, if hazardous, will be managed in accordance with applicable rules and regulations. The contractor will replace the lid on the sump, as it is still in use. The contractor shall be careful not to damage the water transfer line entering and exiting the sump.

#### **5.1.9 Direct Smelt Building**

The Direct Smelt Building (DSB) stored material that was designated for processing within the now demolished blast furnace. Recently, the DSB accumulated ACM prior to placement in the CAMU Phase 2 Cell. The contractor shall anticipate significant bulk solids and adhered material removal from this building, particularly behind the bins walls and along support beams. The contractor shall remove bulk solids and vacuum clean the interior and

surrounding exterior of the DSB. This task shall include vacuuming process material from the interior of bins, from behind bin walls, and from the area surrounding the building. Once all bulk solids are removed and the entire interior of the building has been vacuum cleaned, the contractor shall wash the interior's ceiling, walls, beams, and floor using a low-volume, high-pressure washer.

#### **5.1.10 Coverall Buildings**

The two Coverall buildings were used to store process material prior to the material being directed to the smelting operation. Recently, the Coverall buildings accumulated hazardous wastes prior to the waste being placed in the CAMU Phase 2 Cell. In 2007, the interior floors of the buildings were washed down. The contractor shall dismantle the cement barriers (lego blocks) walls that line the inside of the coverall buildings. The individual lego blocks shall be cleaned using a low-volume, high-pressure washer. The cleaned cement barriers may be stored on the concrete pad west of the coverall buildings. Sheet 4 in Appendix B identifies the outside location where clean cement barriers may be placed. Upon removal and cleaning of all cement barriers from these buildings, the contractor shall vacuum process material from the interior and from the area surrounding the building. The contractor shall wash the building interior floors, walls, ceiling, and support structures using a low-volume, high-pressure washer.

#### **5.1.11 Adobe Shed**

The adobe shed was used to manufacture and store adobe block for use at the blast furnace area. The contractor shall anticipate minimal bulk solids removal from this building. The contractor shall remove bulk solids and vacuum clean the interior and area surrounding the adobe shed. Once all bulk solids are removed and the entire interior of the building is vacuum cleaned, the contractor shall wash the interior (ceiling, walls, floor) of the building using a low-volume, high-pressure washer.

#### **5.1.12 Utility Support Towers**

Two metal support towers are located in close proximity to Asarco's WTF. The towers support active electrical conduits and water carrying pipes. The contractor shall anticipate minimal bulk solids removal from the towers and the surrounding area. Lift trucks or man hoists will be necessary to access the upper portions of the support towers. Some process material has adhered to the tower metal supports, which may require jack hammering or other physical removal methods. Once all bulk solids are removed and the two towers and surrounding areas have been vacuum cleaned, the contractor shall wash the towers using a low-volume, high-pressure washer.

#### **5.1.13 Concentrate Storage and Handling Building (CSHB)**

The concentrate storage and handling building (CSHB) was placed into operations in 1990 to house the majority of concentrate unloading and handling operations. Concrete bins stored materials such as concentrates, by-products, coke breeze, limerock, and silica. A bridge crane accessed material from railcars and from within the bins for placement into material feeders. Feed hoppers proportioned the material onto conveyor belts for delivery to the now demolished sinter plant. The contractor shall anticipate significant bulk solids removal from this building, particularly behind the bins walls, inside the feed hoppers, within the feed area, and along support beams. Some process material may have adhered to the building or bin surfaces, which may require jack hammering or other physical removal methods. The contractor shall expect to use large mechanical equipment and considerable human resources to remove the bulk solids. The contractor shall also remove all visible process materials surrounding the building.

The contractor shall vacuum clean the interior and surrounding areas of the CSHB. This task involves removing all process material from but not limited to the interior of bins, behind bin walls, hoppers, feeders, cranes, railways, and belt lines. The large bins in the Concentrate Storage and Handling Building may be difficult to access. The contractor may consult with Asarco personnel to determine alternative access to bin interiors (i.e., creating access ports in bin walls). Once all bulk solids are removed and the entire interior of the building has been

vacuum cleaned, the contractor shall wash the interior of the building using a low-volume, high-pressure washer. Excess wash water shall not be allowed to stand for lengthy periods of time in areas of the CSHB and must be completely collected by the contractor by the end of each workday.

## **5.2 CLEANING OF BUILDINGS AND STRUCTURES PRIOR TO DEMOLITION**

The cleaning of buildings and structures prior to demolition are shown on Sheet 5 in Appendix B. The cleaning of building and structures that will be demolished shall consist of:

- Prepare identified work areas,
- Conduct initial, dry removal of bulk solids,
- Place removed bulk solids in sealed containers, and
- Haul sealed containers to CAMU Phase 2 Cell.

When compared to the cleaning of buildings and structures that are not scheduled for demolition, those buildings and structures that are scheduled for demolition will require less precise cleaning. The reduced level of cleaning reflects the fact that the building and structures will be demolished and will no longer exist. As before, work area preparation will consist of delineating a work area that can be both easily contained and is considered a cohesive area unit. Once the work area has been defined, the contractor shall begin the removal of bulk solids. The goal of this task will be to remove the gross, dry accumulation of contamination (baghouse bags, process material, etc.) at all accessible areas. Personnel utilizing hand tools shall perform these tasks. A trailer mounted industrial vacuum system equipped with HEPA filtration shall augment the dry removal of process material. Material collected using these procedures shall be loaded via airtight chute into appropriate containers (i.e., double 6-mil mega bags, etc.), weighed, and hauled to the CAMU Phase 2 Cell. The removal of the baghouse bags and dry accumulation of process material will ensure more effective dust control during demolition. The specific cleaning procedures for building, structures, and tanks that are scheduled for demolition is discussed below.



### **5.2.1 Sample Mill and Dust Loadout Baghouses**

The sample mill building served to prepare and split incoming ore concentrates, interplant by-products, crude ores, and high-grade ores prior to chemical analysis and moisture content determination. The individual sample mill process equipment included scales, bucking tables, rod mills, and drying ovens. The bucking rooms were ventilated by the sample mill baghouse. The dust loadout facility was used sparingly to ventilate blast furnace baghouse dust transfer. The contractor shall remove all the bags from the sample mill and dust loadout baghouses and vacuum clean the baghouse interiors prior to demolition.

### **5.2.2 Crushing Mill Baghouses**

The crushing mill was used for size reduction and sampling of crude ores and plant by-products. The individual crushing mill process equipment includes a track hopper, conveyor belts, crushers, feeders, screens, and samplers. The crushing mill utilized three baghouses (two of which are also known as the No. 7 and No.8 sinter plant baghouses) to provide source ventilation. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors prior to demolition.

### **5.2.3 Sinter Stockpile Building Baghouse**

The sinter stockpile building temporarily stored sinter prior to it being processing in the now demolished blast furnace. The sinter stockpile baghouse is located on top of the sinter stockpile building. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior prior to demolition.

### **5.2.4 Concentrate Storage and Handling Building (CSHB) Baghouses, Ventilation Ductwork, and Stack Base**

Two large baghouses provided ventilation to the CSHB. A smaller baghouse provided ventilation to the CSHB feeder area. The sinter plant weak gas handling baghouse and new crushing mill baghouse are attached to the east side of the CSHB. The contractor shall remove all the bags from the baghouses and vacuum clean the baghouse interiors, all associated ventilation piping, and the associated stack base prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines and an above ground gas line

attached to these structures prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

#### **5.2.5 Hopto Pad, Storage Bins, and Conveyor Gallery**

The hopto pad, storage bins, and conveyor unloaded and transferred certain ores and by-products. The ores and by-products were unloaded by a large back-hoe (hopto), placed into a storage bins or receiving hopper, and transferred via a conveyor belt system to the former ore receiving and proportioning building, now known as the direct smelt building. The contractor shall remove any large debris and vacuum clean the hopto pad, storage bins, conveyor gallery, and associated tunnel prior to demolition.

#### **5.2.6 Acid Dust Facility**

The facility stored acid dust within an enclosed silo. The acid dust was agglomerated prior to being conveyed to the CSHB. A small bin ventilation baghouse is located on the top of the silo. The contractor will remove all the bags from the baghouse and vacuum clean the baghouse interior. The contractor will vacuum clean the interior of the silo and acid dust building prior to demolition. In addition, the contractor shall relocate and resupport overhead power lines attached to the structure prior to cleaning. Relocation of the power lines will require a variance from the FAA, which the contractor will be responsible for obtaining, as this line supplies power to the Blast Furnace Stack beacon lights.

#### **5.2.7 Groundwater Sump**

The sump previously collected groundwater in the vicinity of the direct smelt building. Groundwater was pumped from the sump to the internal water handling system to prevent flooding of nearby buildings. After re-construction of the direct smelt building, the necessity of the sump was eliminated. The sump has not been used in the last 10 to 15 years. The contractor shall vacuum clean the base of the four-foot diameter, 14 ½-foot deep groundwater sump that exists near the highline railroad prior to abandonment.

## **7.0 WASTE AND RECYCLABLE MATERIAL MANAGEMENT**

The contractor shall utilize the components of this Work Plan section for coordination and off-site management of the waste streams and recyclable materials that are expected to be generated during the Work Plan. This Work Plan section has been developed to provide guidance, direction, and procedures for managing waste streams (both solid and liquid) and recyclable materials generated as a result of pre-cleaning, cleaning, and demolition activities.

### **7.1 MATERIAL SCENARIOS AND MANAGEMENT OPTIONS**

During the Work Plan implementation, waste streams and recyclable material are expected to be generated. The potential categories and required management options are:

- Friable and non-friable ACM – CAMU Phase 2 Cell,
- Used oil and liquids – Off-site management,
- Universal waste (UW) – Off-site management,
- PCB light ballast – Off-site management,
- Refrigerant – Off-site management,
- Recyclable material - Off-site management,
- Cleaning and demolition material – CAMU Phase 2 Cell, and
- Storm water sump sludge – Off-site management.

Asarco does not anticipate encountering any non-CAMU eligible wastes other than those outlined above. Non-CAMU eligible waste will be managed in accordance with applicable rules and regulations. The contractor shall be responsible for the management of friable and non-friable ACM, refrigerant, recyclable material, and cleaning and demolition material. Asarco will manage the used oil and liquids, universal waste, and PCB light ballast that have been placed in the Shop storage building.

## 7.2 MANAGEMENT OF NON-CAMU MATERIAL STREAMS

The contractor shall containerize all non-CAMU Phase 2 Cell destine material that may encountered during the Work Plan implementation. Recyclable materials will be containerized to meet the specifications of the recycling facility. For all other non-CAMU Phase 2 Cell destine materials, the contactor shall use containers made of or lined with components, which will not react with, and are otherwise compatible with, the material to be transferred or stored, so that the ability of the container to contain the waste is not impaired.

If a container holding non-CAMU Phase 2 Cell material becomes compromised (e.g. severe rusting, apparent structural defects), or if it begins to leak, the contractor shall immediately transfer the material to a secure container. The contractor shall inspect containers and areas used to accumulate containerized materials at least weekly. Asarco will be responsible for inspecting containers placed into the shop storage building.

Incompatible wastes shall not be placed within the same container. The contractor shall handle and manage incompatible waste in such a manner that prevents violent reactions, generation of uncontrolled fumes, mists, gases and dusts, production of flammable fumes or gases and damage to the integrity of the material container.

Hazardous materials shall not be placed in an unwashed container that previously held an incompatible material. A container holding hazardous materials that is incompatible with any material transferred or stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other material.

The contractor shall store all hazardous material in containers suitable for transport in accordance with 49 CFR Parts 170 through 179 or the requirements of the transporter, whichever is more stringent. No material shall be transferred or stored in a manner, which may rupture the container or cause it to leak.

### **7.3 LABELING OF MATERIALS**

The contractor shall apply proper marking and labeling on all containers when the material is first placed inside the container. Hazardous material that is stored in bulk shall be posted with a sign that bears an appropriate label as well as the information required for waste area signs, as applicable.

During pre-cleaning activities or as otherwise encountered, the contractor may encounter waste streams that are placed into unidentified containers or the exact contents are unknown. For those instances, the contractor will mark the container with a "Non-Classified Material: Laboratory Analysis in Progress" label. This label will identify the material as an uncharacterized material stream. The contractor shall indicate on the label where the containerized material originated and, if a reasonable amount of information is available, the suspected material contents. An accumulation date will be added to the label. The contractor shall immediately notify Asarco when unidentified materials are first encountered. The material determination and accumulation of materials shall be managed in accordance with applicable rules and regulations.

### **7.4 MANAGEMENT OF CAMU APPROVED MATERIAL**

Demolition material will be loaded with track or rubber-tired loaders and transported via trucks to the CAMU Phase 2 Cell. Friable ACM shall be wrapped and contained, loaded, weighed, transported, and placed in the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. At no time will friable material be exposed to the environment. Non-friable ACM does not require special containerization prior to placement in the CAMU Phase 2 Cell. The contractor shall strictly enforce the dust control measures, as described in the DCP, to ensure control of materials placed in the CAMU Phase 2 Cell. The placement of waste into the CAMU Phase 2 Cell will be governed by the specifications set forth in the approved CAMU Design Analysis Report (including the May 22, 2008 addendum) as discussed in Section 8.0. A copy of the CAMU Design Analysis Report will be provided to the contractor.

## **7.5 MATERIAL MANAGEMENT QUALITY CONTROL**

Material management quality control will be accomplished through the use of administrative, engineering, and physical controls that will include, but not be limited to the following:

- Routine inspections of material storage areas,
- Curtailing of work activities during high wind conditions (over 15 MPH average hourly rate),
- Curtailing of material handling and transport during rain events with sufficient volume to create run-off,
- Pre-identification and handling of material requiring special management, and
- Decontamination of equipment used to handle material.

### **7.5.1 Inspections**

The contractor shall implement inspection procedures to assure control of material that have been placed into material storage areas. The contractor shall conduct, at least weekly, inspections of the areas designated for container storage or transfer. The contractor shall inspect the area for evidence of deterioration of containers and secondary containment. Additionally, inspection of container labeling and accumulation dates will be completed to ensure that all containers are properly and legibly labeled. Accumulation dates will be reviewed for compliance. The contractor shall inspect containers and storage areas to ensure that they are not, have not, and will not be susceptible to any weather event that could cause release of a hazardous material streams onto the site or into the storm water system.

### **7.5.2 Work Stoppage**

The contractor shall halt work when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with a 15 MPH average hourly rate or more are present, the contractor shall halt the handling of waste. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. If the rain presents run-off conditions, the work activities shall

cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant.

### **7.5.3 Special Material Handling and Segregation**

The contractor will ensure that all material requiring special handling have been removed from the structures to be demolished. Special materials shall consist of ACM, UW, used oils, and liquid wastes, PCB ballasts, and refrigerant. UW, liquid wastes, PCB ballast, and refrigerant shall be removed from buildings and structures, handled, and stored as non-CAMU Phase 2 Cell materials. ACM material that is scheduled for placement in the CAMU Phase 2 Cell will be segregated.

### **7.5.4 Decontamination of Equipment**

The contractor shall provide for the decontamination of equipment used in the handling and/or transport of demolition debris prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. The contractor shall establish a decontamination pad, in an area agreed and approved by Asarco. The location of the decontamination pad may change depending upon demolition activities and the evolution of the project site. This decontamination pad shall be situated on a concrete slab suitable for placement of heavy equipment.

Decontamination will consist of one or a combination of the brushing, vacuuming, or washing methods. The goal of the decontamination is to remove metal bearing dust and debris from the areas of the equipment that came into contact with this material. Upon completion of the decontamination activity, any removed dust and debris will be hauled to the CAMU Phase 2 Cell.

Equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control.

## **8.0 WASTE HAULING, PLACEMENT, AND CAMU PHASE 2 CELL OPERATION AND CLOSURE**

### **8.1 OPENING CAMU PHASE 2 CELL FOR WASTE PLACEMENT**

The contractor shall be responsible for opening the CAMU Phase 2 Cell prior to the placement of waste material generated under this Work Plan. The contractor shall ensure that all site storm water controls are in proper working order, make any necessary repairs, and follow all state and federal storm water regulations. The temporary reinforced polyethylene (RPE) liner, currently covering the waste shall be removed by the contractor and saved for reuse once 2009 demolition waste placement is complete or shall be left in place, thoroughly perforated by the contractor so that it will not hold water, prior to waste placement, and replaced with a new temporary cover at the end of the 2009 construction season. Asarco prefers that the existing temporary RPE liner be reused. However, the contractor shall be responsible for determining the most cost effective option. If the temporary RPE liner is saved for reuse, it shall be peeled back with care taken not to tear or contaminate it. The contractor shall be responsible for ensuring that the liner currently in contact with hazardous waste does not come in contact with the clean side of the liner. If the clean side of the liner comes in contact with the dirty side of the liner, the contractor shall be responsible for replacing the liner. If the contractor determines that leaving the current RPE liner in place and furnish a new temporary liner is the most cost effective approach, the contractor shall cut the existing RPE liner and underlying 10-ounce non-woven geotextile into pieces that are 36 square feet or smaller. For both options, the contractor will need to remove the RPE liner and geotextile around the exterior of the CAMU Phase 2 Cell, including the liner buried in the anchor trenches, so that the liner does not extend past the boundary of the cell. Any RPE liner and geotextile material placed in the CAMU Phase 2 Cell shall be sized to less than 6-foot by 6-foot sheets before being placed in the CAMU Phase 2 Cell. The contractor shall place these sheets in the CAMU Phase 2 Cell under the direction of Asarco's engineering consultant.



## **8.2 CAMU WATER MANAGEMENT**

Any storm water contacting the waste material shall not be discharged, but shall be transferred to the Asarco WTF. The contractor shall be responsible for management of water reporting to the CAMU Phase 2 Cell leachate collection sump while the CAMU Phase 2 Cell is open. Asarco's engineering consultant will be responsible for management of water reporting to the CAMU Phase 2 Cell leak detection sump throughout Work Plan implementation. The contractor shall have readily available pumps capable of pumping 400 gallons per minute in the event of a significant rainfall event. The contractor will remove any water from the leachate collection system, collect the water in a tank, and deliver the water to the Asarco's WTF.

## **8.3 ON-SITE DEBRIS TRANSPORTATION**

The contractor shall implement a proactive approach to ensure that the transportation of waste debris does not generate dust or spread waste debris outside the limits of the loading area and the final CAMU Phase 2 Cell placement area. For all management of demolition debris, the contractor shall utilize the Dust Management Plan. The implementation of the Dust Management Plan will minimize airborne dust during the loading operation and constitute the initial dust prevention step during transportation. The contractor shall use end dump trucks, side dump trucks, 10-wheel dump trucks, or similar containerized equipment to haul the material to the CAMU Phase 2 Cell. All trucks must be equipped with sealed tailgates that will be closed during times of hauling to ensure that debris is not released outside the limits of the loading and dumping area.

## **8.4 OFF-SITE PREPARATION AND TRANSPORT**

The contractor shall ensure that the debris leaving the facility for eventual placement in the CAMU Phase 2 Cell, is weighed, sampled, and moistened and is responsible for coordinating with Asarco's engineering consultant. ACM shall be weighed but not sampled. The contractor shall direct all haul trucks to an on-site scale for weighing. Asarco's engineering consultant shall weigh and photograph all waste being transported to the CAMU Phase 2 Cell. Representative samples will be collected from the trucks payload at the interval

specified in Section 9.0 of this Work Plan. The contractor shall erect and use a moistening station that consists of a scaffolding platform on which personnel will mist water on the loaded debris as a final step before exiting the site. The water spray will add a final moisture barrier and binder to the debris for the short distance haul to the CAMU Phase 2 Cell. All transport vehicles shall be limited to a maximum of 10 miles per hour during transport. Limiting speeds shall minimize dust from becoming airborne during transport and shall minimize kick-up from rolling tire action. In addition, the contractor shall place and maintain large gravel on a section of the haul route at the plant exit and CAMU exit, to remove loose dust and debris from haul truck tires. Once hauling of waste is complete, the contractor will place this gravel material in the CAMU Phase 2 Cell.

### **8.5 PLACEMENT OF WASTE**

Once haul trucks arrive at the CAMU Phase 2 Cell, the material will be placed into the cell at a location specified by the contractor. ACM is the only material with a designated location within the CAMU Phase 2 Cell. Asarco's engineering consultant will direct the contractor to this location. A water truck shall be located in close proximity to the CAMU Phase 2 Cell to lightly mist debris and knock down any dust during the material dumping and spreading phase. The use of water will be kept to a minimum. Additional water will be applied to locations in the CAMU Phase 2 Cell to minimize the potential for fugitive dust emissions. Asarco reserves the right to stop placement of waste in the CAMU Phase 2 Cell if visible fugitive dust emissions are present. Materials will be placed and compacted in the cell to minimize voids, settlement, and damage to the liners. Demolition debris and waste soils will be placed and compacted in the cell in lifts not to exceed 2 feet thick across the bottom of the cell. All materials delivered to the cell for placement will require some segregation. This will allow consolidation of the materials during compaction and will result in a homogeneous mass with a minimal amount of voids. Specifically, bulk concrete and metal debris will be broken or otherwise reduced in size not to exceed a vertical dimension of 2 feet. There are no horizontal or width dimension restrictions other than the debris must fit in a haul truck to be transported to the CAMU Phase 2 cell. All material requiring size reduction will be resized at the structure demolition site using excavators with concrete breakers or shears before being

transported to the CAMU Phase 2 Cell. Large organic material (e.g. timbers) and manufactured metal will be placed horizontally in the cell as flat as possible to minimize voids. The railroad ties placed in the CAMU Phase 2 Cell will not be piled in one location, but will be spread out evenly throughout the CAMU Phase 2 Cell footprint. Asarco's engineering consultant will inspect the open CAMU Phase 2 Cell at least twice daily to assess the potential for windblown dispersion of fugitive dust.

## **8.6 WASTES REQUIRING SPECIAL MANAGEMENT**

Wastes requiring special management include ACM and heavy metal dust from cleaning activities. The procedures for containerizing these wastes shall be conducted in the demolition areas prior to the materials being loaded on haul trucks. ACM and heavy metal dust will be handled according to the procedures outlined in Section 2.0 of this Work Plan and in the contractor's HMAP. All friable ACM shall be wrapped, contained, loaded, transported, and placed in the southwest corner of the CAMU Phase 2 Cell in such a manner that the integrity of the wrapping is not breached. Once the ACM has been placed in the cell, its location will be surveyed by Asarco's engineering consultant. The ACM shall be covered daily with soil to maintain the integrity of the wrapping. The location of the ACM shall be shown on the as-built drawings of the CAMU Phase 2 Cell. At no time will friable ACM be exposed to the environment. Non-friable ACM will be loaded and transported as described above for demolition debris. All ACM (both friable and non-friable) will be completely covered at the end of each work-day

## **8.7 WORK STOPPAGE**

Work shall halt when weather conditions are such that the spread of contaminated dust and debris is likely. These conditions typically exist when there is excessive wind and/or rain. Therefore, if wind with sustained readings of 15 MPH (average hourly rate) or more occur, the handling and hauling of waste both on-site and off-site will halt. The sustained wind speeds will be monitored by Asarco's engineering consultant through the use of a calibrated on-site anemometer and through data provided by the National Oceanic and Atmospheric Administration (NOAA) at [www.noaa.gov](http://www.noaa.gov) for wind speeds at the Helena Airport.

Furthermore, if a rain event begins, site conditions will be re-evaluated. If a rain event begins, the contractor shall evaluate the site conditions. If the rain presents no run-off, work activities will proceed uninhibited. If the rain presents run-off conditions, the work activities shall cease until such time that a run-off potential is not present. The contractor will evaluate these conditions with Asarco's engineering consultant. In the event that transport is halted, no additional trucks will be loaded and trucks containing wastes will be covered until conditions improve.

### **8.8 DECONTAMINATION AND INSPECTION OF EQUIPMENT**

The equipment used in the handling and/or transport of demolition debris will be decontaminated prior to the equipment leaving the site, or moving from a demolition zone to an area considered clean. Decontamination pads, a concrete slab suitable for placement of heavy equipment, will be established, in areas agreed upon with and approved by Asarco. The location of the decontamination pads may change as demolition activities progress. However, all equipment will be decontaminated within close proximity to exits from the Asarco facility. The equipment that has been decontaminated will be inspected upon completion to ensure the adequacy of the process and to document the process to ensure quality control prior to the transport vehicle leaving the site.

Decontamination will consist of one or a combination of brushing, vacuuming, or washing methods. The goal of the decontamination is to remove heavy metal laden bearing dust and debris from the areas of the equipment that contacts the waste. Upon completion of the decontamination activities, any removed dust and debris residue will be hauled to the CAMU Phase 2 Cell.

Haul trucks leaving the CAMU Phase 2 Cell will be traveling on paved haul roads and will not be decontaminated until enter the Asarco smelter facility, where they will be decontaminated on one of the decontamination pads. Any large debris will be dislodged from haul trucks as they leave the CAMU Phase 2 Cell. The section of haul road between the

CAMU Phase 2 Cell and the Asarco facility will be monitored and swept on a regular basis. Asarco's engineering consultant shall inspect the haul road twice daily.

Transport vehicles will be inspected periodically to ensure that truck beds and gates are properly sealed and that debris is not building up. Full decontamination of vehicles that are leaving the Asarco facility should occur periodically.

The equipment used in the CAMU Phase 2 Cell for spreading and compacting waste will be decontaminated at the Asarco facility. This equipment will be placed on trailers and driven via the haul road back to the Asarco facility for decontamination in a designated area.

#### **8.8.1 Work and Road Surface Cleaning**

The contractor shall implement the road surface cleaning procedures set forth in the Dust Control Plan.

### **8.9 SPILL MITIGATION**

Spills of soils or debris being transported to the CAMU Phase 2 Cell shall be prevented by constant maintenance of trucks to make sure they are properly sealed and in good working order. In addition, traffic control and slow truck speeds will minimize the occurrence of accidents. If waste is spilled in route to the CAMU Phase 2 Cell, the hauling of waste will halt and the spilled waste will be cleaned using clean decontaminated equipment. If the spill occurs on the haul road, the road will be swept clean.

The twice-daily inspections, Section 8.10, of the area surrounding the CAMU Phase 2 Cell shall include observations for visible fugitive emissions. If a release from the area is observed during an inspection, the waste will be removed and cleaned using clean decontaminated equipment and placed in the CAMU Phase 2 Cell.

## **8.10 SITE INSPECTIONS – OPERATION**

Asarco's engineering consultant will perform inspections of areas surrounding the CAMU Phase 2 Cell and the haul road between the CAMU and ASARCO smelter facility twice daily when the CAMU cell is in operation. Daily inspections of the road used for hauling waste will occur when the haul road is in use. While the CAMU cell is in operation it will be inspected once per week by Asarco's engineering consultant. Quarterly monitoring of groundwater quality and semi-annual site inspections will ensure that public health and safety are maintained at the site. Monitoring and inspection protocol shall be conducted consistent with the CAMU Phase 2 Cell Operating Plan.

### **8.10.1 Daily Inspections**

While the landfill is in operation, inspection of the grounds surrounding the CAMU shall be inspected twice daily. These inspections shall include an assessment of the potential for windblown dispersion of fugitive dust from the CAMU and a visual inspection of the grounds surrounding the CAMU for any visible releases of fugitive dust from the CAMU cell. The haul route used by trucks leaving the CAMU and returning to the ASARCO smelter facility shall also be inspected twice daily to ensure that it remains clean and free of dust and debris. The remainder of the haul road shall be inspected once per day to ensure that it is free of dust and debris. Daily inspections shall be documented and recorded on the Daily Inspection Form included in the CAMU Design Analysis Report and any problems found will be reported to the project manager and addressed immediately.

### **8.10.2 Weekly Inspections**

While the landfill is in operation, it shall be inspected weekly and after significant storms to detect evidence of any deterioration, malfunctions, or improper operation of run-on and runoff control systems, and the proper performance or presence of liquids in the leachate collection and leak detection system. Inspection of the perimeter fence, gates, condition of haul roads, condition of storm water pond, presence of precipitation run-off or ponded liquids, condition of decontamination pads, and the condition of haul trucks will be included

in weekly inspections and any maintenance needed will be recorded on the Weekly Inspection Form included in the CAMU Design Analysis Report and addressed appropriately.

#### **8.11 CLOSING THE CAMU PHASE 2 CELL**

Upon completion of placement of demolition debris and waste soils in the CAMU Phase 2 Cell, the temporary RPE CAMU cap shall be constructed. This component of the CAMU Phase 2 Cell temporarily closes the CAMU Phase 2 Cell and prevents infiltration of precipitation. The temporary RPE cover consists of a 24-mil RPE , underlain by a geotextile, as specified in the CAMU Design Analysis Report, "Design Analysis Report, Asarco East Helena, Corrective Action Management Unit (CAMU) Phase 2 Cell, July, 2008", approved by the EPA. The contractor shall grade all waste placed in the CAMU Phase 2 Cell according to the specifications in the CAMU Design Analysis Report to allow for proper drainage off the temporary cover. In addition, the contractor shall ensure that no rebar, sharp metal, or sharp concrete edges protrude from waste. The temporary cover shall be installed according to the design drawings and specifications presented in the approved CAMU Design Analysis Report.

## **9.0 WASTE SAMPLING AND ANALYSIS**

Asarco's engineering consultant in coordination with the contractor shall implement the components of the waste sampling and analysis. The waste sampling and analysis section of the Work Plan is designed to assess representative samples of waste being hauled and placed in the CAMU Phase 2 Cell. This section provides the methodology and procedures for each sampling and analysis task. The collection of representative samples and characterization of waste being hauled to the CAMU Phase 2 Cell will conduct the follow tasks:

- Description of payload inside sampled trucks,
- Photo-documentation the truck payload,
- Grab sampling of wood, dirt, dust, brick, railroad ties, and concrete materials, and
- Laboratory analyses of collected grab samples.

### **9.1 SAMPLING FREQUENCY AND PROCEDURES**

The cleaning and demolition waste and miscellaneous railroad ties being hauled to the CAMU Phase 2 Cell for disposal will be sampled from the payload of the haul truck, after the haul truck has been weighed but prior to the haul truck leaving the Asarco facility. The payload of each truck will be recorded and a photograph will be taken.

During Work Plan implementation, four work areas will have demolition material removed and transported to the CAMU Phase 2 Cell. These work areas are presented in Table 9-1. The materials being hauled to the CAMU Phase 2 Cell from cleaning activities are not included in Table 9-1, as quantities of these materials cannot be determined. The work area designations are based on the contractors schedule for demolition, processes that occurred in these areas, and the materials used to construct the buildings. A sample will be collected from one out of every 20 trucks hauling waste from each work area. At least one sample will be obtained from each of the four areas for every 20 haul trucks that transport waste from that area to the CAMU Phase 2 Cell. The CSHB ventilation system and stack are mainly composed of metal. The majority of the material should be recyclable. If non-recyclable



material is hauled from this area to the CAMU Phase 2 Cell, one sample will be collected from every 20 haul trucks, assuming that the material being hauled is not metal. In addition, one sample will be collected from every 20 haul trucks from waste generated by cleaning activities. The quantity of material generated by cleaning activities and the quantity of railroad ties to be hauled to the CAMU Phase 2 Cell is unknown and is therefore not included in Table 9-1.

**TABLE 9-1. MATERIAL VOLUMES AND ESTIMATED SAMPLES**

<b>2009 Work Plan Work Areas</b>	<b>Material Volume (cubic yards)</b>	<b>Number of Haul Trucks (assume 15 yards/truck)*</b>	<b>Minimum Number of Samples (1/20 trucks)**</b>
Sample Mill, Crushing Mill, Soil Pile by Sample/ Crushing Mill, Hopto Pad, Storage Bins, and Conveyor Gallery, Acid Dust Facility.	7100	474	24
Sinter Stockpile Building, Highline Railroad, Abandoned and New Breaking Floor, Groundwater Sump.	1,370	92	5
Concentrate Storage and Handling Building Ventilation System	0	0	0
400' D&L Stack, 200' Acid Stack, 425' Blast Furnace Stack	6,890	460	23
<b>Total</b>	<b>15,360</b>	<b>1,026</b>	<b>52</b>

Number of haul trucks assumes a 15 cubic yard capacity. Alternative truck haul capacities may be used by the contractor (typically a range of 10 cubic yards to 20 cubic yards).

The actual number of samples may vary based on the capacity of the haul trucks used and the number of truck loads. The number of samples will be adjusted to the actual number of truckload transported to the CAMU.

Each haul truck payload to be sampled will be divided into five areas. A grab sample shall be collected at a random location within each of the five areas. If, based upon Asarco's engineering consultant's determination, a location within a sampling area can be visually identified to be potentially the worse case for that area, the sample will be obtained from that location to bias the sample. If, based on Asarco's engineering consultant's judgment, it is not possible to identify a worse case location, the sample will be obtained from a random location. All five samples will be combined into one composite sample and mixed thoroughly. This composite sample will be forward to the laboratory for analyses.

A sampling notebook shall include the location and work area where waste is being hauled from, a description of the materials in the haul truck payload, the sample identification number, and the date and time the sample is taken. A photograph of the truck payload will also be collected.

## 9.2 LABORATORY PROCEDURES

Laboratory analysis will be performed for total metals using analytical methods shown in Table 9-2.

**TABLE 9-2. CAMU SOILS ANALYTICAL PARAMETER LIST**

Parameter	Analytical Method <sup>(1)</sup>	Practical Quantitation Limit (mg/Kg)
<i>Total Metals — Digestion by EPA Method 3050 (Method 7471 for Mercury)</i>		
Aluminum (Al)	6010B/6020	5
Antimony (Sb)	6010B/6020	5
Arsenic (As)	6010B/6020	5
Barium (Ba)	6010B/6020	5
Beryllium (Be)	6010B/6020	5
Cadmium (Cd)	6010B/6020	1
Chromium (Cr)	6010B/6020	5
Cobalt (Co)	6010B/6020	5
Copper (Cu)	6010B/6020	5
Gold (Au)	6010B/6020	5
Iron (Fe)	6010B/6020	5
Lead (Pb)	6010B/6020	5
Manganese (Mn)	6010B/6020	5
Mercury (Hg)	7471	1
Nickel (Ni)	6010B/6020	5
Selenium (Se)	6010B/6020	5
Silver (Ag)	6010B/6020	5
Thallium (Tl)	6010B/6020	5
Vanadium (V)	6010B/6020	5
Zinc (Zn)	6010B/6020	5

NOTES: (1) Laboratory analytical methods are ICP and ICP-MS techniques from EPA SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*.

## 11.0 EXPOSED SOIL SAMPLING

Asarco's engineering consultant shall be responsible for the soil sample collection tasks outlined in this Work Plan section. Soil samples will be collected from designated areas where exposed soils are present within the demolition footprint. As part of site surveys conducted in 2007, exposed soil areas within or adjacent to cleaning and demolition footprint areas were identified in the field and mapped. Prior to conducting the exposed soil sampling procedures, visually obvious dust (typically indicated by dark gray or black color and fine-grained, silty texture) within demolition footprint areas will be removed by the contractor. Asarco's engineering consultants shall conduct soil sampling and the contractor will provide personnel and equipment to conduct the test pit excavation. In 2009, a total of seven samples shall be collected. The sample locations are shown in red on Sheet 10 in Appendix B. Asarco will submit the soil sampling results including laboratory QA/QC information, sample receipt checklists, and chain-of-custody to the MDEQ and EPA as part of their 2009 Work Plan summary report.

### 11.1.1 Exposed Soil Area Sampling Methods

The identified exposed surface soil areas that will be encountered within the cleaning and demolition footprints shall be sampled and analyzed for the following indicator parameters: arsenic, copper, cadmium, lead, zinc and selenium, and supplemental parameters: aluminum, antimony, barium, beryllium, chrome, cobalt, iron, manganese, mercury, nickel, silver, thallium and vanadium using wet chemistry standard EPA methods. The soil sample collection and analytical matrix is summarized in Table 11-1.

#### 11.1.1.1 Initial Exposed Surface Soil Characterization

A total of five surface (0 - 4" increment) soil samples shall be collected from each sample site in identified exposed soil areas and composited into one representative sample of the area. Surface soil samples will be collected using hand tools (hand shovels, trowels, or hand augers). The samples will be stored in ziploc bags and archived for analysis. All analytical work will be conducted before the 6-month holding time limit for metals. The location of

each soil sampling site will be cataloged using sample numbers and GPS coordinates. A photograph of each sample site will be taken. The sampling Standard Operation Procedures (SOPs), analytical parameters, and methods are summarized in Table 11-1.

The surface soil samples shall be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000).

#### **11.1.1.2 Exposed Soil Subsurface Profile Sample Collection**

The exposed area sub-surface soil profile samples will be collected at the depth intervals shown in Table 11-1 and analyzed for the indicator parameters arsenic, cadmium, copper, lead, zinc and selenium. Samples shall be collected from test pits advanced using standard excavation equipment. The test pits will be advanced to standard excavation practical limits of 15 feet or until equipment refusal is encountered. Excavator equipment refusal is defined by the inability to advance the excavation in the event of encountering the groundwater table, or in the event hard boulder strata conditions prohibit the ability of the excavator to advance the test pit.

The test pit subsurface soil samples will be analyzed using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) at a commercial laboratory. The final interval samples will also be submitted to a commercial laboratory for definitive analysis using standard EPA wet chemistry methods (EPA Methods SW 6010/6020) and Synthetic Precipitation Leachate Procedure (SPLP).

The soil sample collection and analytical matrix is summarized in Table 11-1. As the table shows, initial and final samples will be analyzed for indicator parameters (As, Cd, Cu, Pb, Se, and Zn) and for supplemental parameters (Al, Sb, Ba, Be, Cr, Co, Hg, Fe, Mn, Ni, Ag, Tl, and V). The final sample increment will also be analyzed using the Synthetic Precipitation Leachate Procedure (SPLP).

**TABLE 11-1. DEMOLITION FOOTPRINT UNPAVED EXPOSED AREA SOIL,  
SAMPLE COLLECTION AND ANALYTICAL MATRIX**

(H:\files\007 asarco\9006\2009 cleaning-demo plan\table 11-1.xls\tab3-3 sampmatrix)

Sub-surface soil samples will be collected directly from the soil excavation equipment bucket in the following increments. Sub-surface soil increments are: 4 - 12", 1 - 2', 2 - 4', 4 - 6', 6 - 8', 8 - 10', 10 - 12', and 12 - 15'. One soil sample will be collected directly from the backhoe bucket for each increment within an identified exposed soil sample area.

Sub-surface soil samples will be collected from exposed soil areas using the same techniques and procedures used for Interim Measures (IM) and RCRA Facility Investigation (RFI) activities, as described in the IM and RFI Work Plans (Hydrometrics, 1999b and Hydrometrics, 2000). Samples will be stored in ziploc bags and shipped to the laboratory for analysis.

## 12.0 PLUG AND ABANDON UNDERGROUND UTILITIES

The contractor shall be responsible for plugging and abandoning underground utilities outlined in this Work Plan section and is responsible for coordinating this task with Asarco's engineering consultant. Underground piping and structures exist within the footprint in which demolition will take place. The underground piping and structures will be plugged and sealed in place once demolition is complete but prior to final grading and the interim cap being installed. The utility locates shall be performed by the contractor and compared with the utility drawings and underground utility information provided by Asarco to identify as many underground utilities as possible. The underground utility maps provided by Asarco are included as Sheets 11 and 12 in Appendix B. The abandoned underground utilities that shall be flow filled are illustrated on Sheet 13 in Appendix B.

Utility piping larger than 6 inches in diameter will be flushed with water and blown out with air to ensure flow within the pipes. The sanitary sewer lines that are scheduled for plugging and abandoning will be flushed with water containing a bleach mixture and blown out with air. The contractor should anticipate that some utilities/piping may contain some residual material (e.g. plant water, residual pipe sediment, sewage) from previous activities and will need to take necessary precautions in the handling and disposal of any such materials. The water collected from the flushing of the underground utilities will first be routed to Asarco's on-site car wash thickener building for solids separation and then to Asarco's WTF. Large solids (if any) will be dried at the car wash thickener building prior to placement in the CAMU Phase 2 Cell. Any fine sediment (if any) that pass through the car wash thickener process will be managed in the sediment handling system of Asarco's WTF and transported off-site for disposal. Sediment that may be present in the ferrous-containing plant water pipe and plant water return lines will be comprised primarily of rust. Further characterization of the sediments removed from the flushing of the underground utilities will not take place but will be managed as previously described.

All existing underground utilities (e.g. piping conduits, fire plugs, or sumps) will be plugged/capped and abandoned in place along their entirety utilizing flow fill or other approved material. Flowable fill or control density fill (CDF) shall be used as a low strength, self consolidating fill material for confined spaces which can be easily excavated at a later time. CDF is characterized by a high maximum slump of 8 inches. CDF shall consist of Portland Cement, aggregates, water, and fly ash. Chemical admixtures and other mineral admixtures may be used. The actual mix proportions and flow characteristics shall be determined by the producer of the CDF to meet site conditions. In all piping systems, the flow fill will be introduced using pressure not to exceed 100 psi. The grouting will continue at the inlet of the underground utility until a steady flow of grout exits the pipe outlet. The outlet will be sealed then the inlet will be grouted under pressure using a pressure between 50 and 100 psi.

One 4-foot diameter groundwater sump exists within the demolition footprint near the abandoned breaking floor building as shown on Sheet 13 in Appendix B. This sump is 14.5 feet deep and shall be abandoned. This sump was used to dewater the Direct Smelt Building and was never used as a monitoring well. The sump shall be abandoned under the State of Montana well abandonment regulations (ARM 36.21.670). Once the sump is clean and the above ground section is demolished, it will be filled with cement grout to grade using the specifications required under ARM 36.21.675.



- A minimum 10-ounce non-woven geotextile,
- A prepared sub-grade consisting of fumed slag fill for grading purposes, and
- Existing soils, concrete slabs and/or concrete foundations.

Upon completion of the demolition operations, footprint soil sampling, and area clean-up, the contractor shall remove all debris and items from the slab that could possibly penetrate the geotextile and geomembrane. This includes, but is not limited to, protruding rebar, pipes, and sharp concrete. The contractor shall utilize the existing on-site fumed slag as fill material over the identified areas. This fumed slag will be placed and rough graded to create the positive drainage required per Sheet 14 and 15 in Appendix B. The fumed slag has been used as a grading material at the plant site in the past and possesses good physical characteristics for fill or sub-foundation uses (granular material and compacts wells). Once the slag fill is graded to allow for proper drainage, it shall be rolled with a smooth drum vibrating roller to create a smooth surface for temporary liner placement.

The geotextile and geomembrane shall be laid, seamed, and secured as detailed on Sheet 16 in Appendix B unless the contractor proposes alternative methods that are approved by Asarco. Additionally, sandbags will be placed intermittently within the center liner area to prevent the liner from being picked up by wind uplift or other forces. If the contractor chooses to use tethered tires to secure the interim caps, the number of tires should be limited. The contractor will warranty their work and may present alternative anchoring techniques acceptable to Asarco to ensure their warranty. The contractor will be responsible for all future repairs to the liner for a period of one year from the date of installation. As an added preventative measure, the contractor shall utilize sandbags made of UV Resistant 9-mil PE, which will provide superior UV resistance (compared to standard plastic woven sandbags) to prevent breakdown by sunlight. All sandbag openings shall be secured using heavy-duty zip ties.

### **13.4 MAINTENANCE OF INTERIM CAP**

#### **13.4.1 Site Inspection**

Asarco shall conduct periodic inspections of the interim cap to ensure that the interim cap systems are performing adequately and to identify problems and provide proper maintenance of interim cap systems. The inspection program will involve three types of inspections: (1) informal inspections, (2) periodic technical inspections, and (3) special inspections after extreme events.

The informal inspection is actually a continuing effort by on-site personnel, performed in the course of their normal duties. Periodic technical inspections and inspections after extreme events will be performed by onsite Asarco staff (or other technical representatives) familiar with the design and construction of the capping systems. The periodic technical inspection will be performed monthly to document the condition of the cap components. Special inspections are very similar to periodic technical inspections but are performed only after an extreme event such as a rare rainstorm, tornado, or earthquake.

The inspection of the interim cap system will typically involve walking the entire site in a systematic fashion that ensures a comprehensive review. If any problem or deficiency is found, the inspector should record the location on a field sketch. A complete description of the affected area, including all pertinent data (i.e., size of the area and other descriptive remarks such as exposed synthetic materials) should be recorded on the appropriate reporting forms. An accurate and detailed description of observed conditions will enable a meaningful comparison of conditions observed at different times.

Photographs may be helpful in documenting problems. Provisions should be made to keep a photographic log of problems, repairs, and general site conditions. This log will provide valuable information when evaluating the performance of the interim cap system and when planning repair strategies.

It is important to have a record of site conditions at various stages after capping. Good documentation will provide valuable information to help maintenance and repair planning. Inspection checklists to assist in the inspection and documentation procedures should be developed and modified as needed throughout the interim capping period. The checklist will (at a minimum) contain items to evaluate such as membrane condition, sand bag condition, liner seams, liner/concrete attachments and site drainage. A copy of an example inspection form is attached in Appendix D.

#### 13.4.2 Site Security

The interim cap will be contained within the fenced Asarco facility and will be kept secured so that people or animals do not disturb the interim cap. Site access by ongoing plant or demolition operations will be limited through the use of barricades, barrier tape, or temporary fencing. Plant personnel will advise contractors conducting site activities of access limits within or near capped areas.

#### 13.4.3 Site Maintenance

As shown in Table 13-1, there are four different types of maintenance tasks listed by priority rather than by frequency. Table 13-1 is provided as a guide to prioritize the different types of maintenance activities in proper perspective. The different types of maintenance are also discussed in the following subsections.

**TABLE 13-1. PRIORITY OF MAINTENANCE TASKS**

Priority	Type of Maintenance	Description and Example
1	Emergency	A situation requiring immediate attention (for example, fire or flood).
2	Preventative	Scheduled inspection and minor repairs carried out during inspection (for example, cleaning of membrane liner).
3	Corrective	Corrective maintenance required as a direct result of scheduled inspection (for example, repair of torn membrane liner).
4	Housekeeping	Routine housekeeping of buildings and grounds (for example, disposal of debris and general housekeeping).

## 15.0 PROJECT OVERSIGHT

Asarco shall contract a engineering consultant to conduct the project oversight associated with the implementation of this Work Plan. Project oversight will include oversight of all activities outlined in this Work Plan to ensure the contractor meets all expectations and provisions. In addition, Asarco will hire third party independent oversight to perform quality assurance on the removal and reinstallation of the temporary cap on the CAMU Phase 2 Cell.

- g. threshold of recoverable metals and maximum allowable toxic metals), (2) a demonstration that the receiving facility is in compliance with all applicable environmental requirements, (3) a copy of the contractual agreement between Asarco, its broker and the receiving facility, (4) the name of the state or provincial regulatory contact and facility contact.

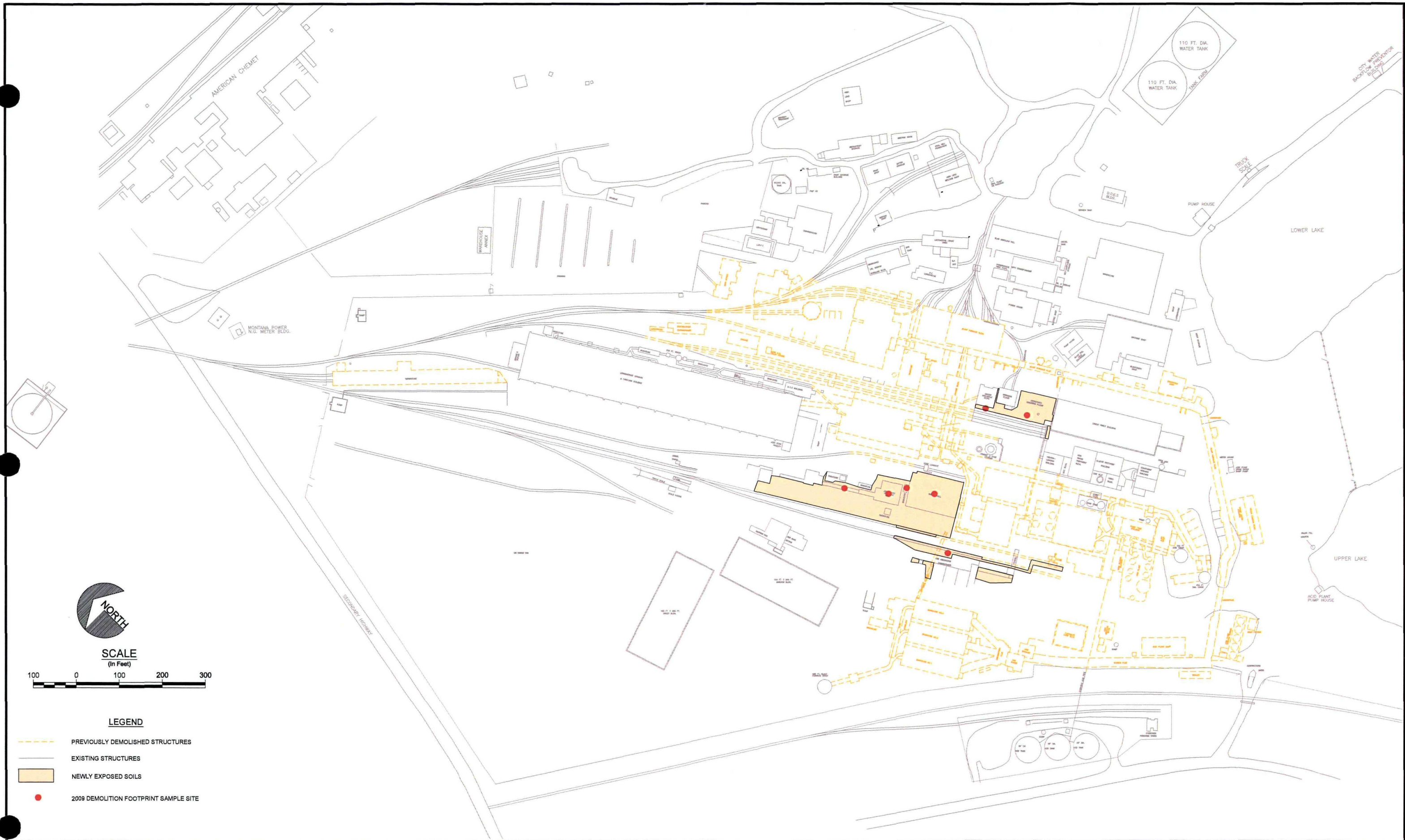
Quarterly reports will not be required after submittal of the 2009 Work Plan Completion Report.

## **16.2 ANNUAL REPORTING**

Within thirty (30) days, but, no later than March 31, 2010, after Asarco concludes that it has fully implemented the materials removal outlined in the 2009 Cleaning and Demolition Work Plan, Asarco shall submit a 2009 Work Plan Completion Report to the MDEQ and EPA. The contents of the Work Plan Completion Report will include:

- a. A description of the cleaning efforts conducted;
- b. If applicable, documentation of all shipments of recyclable materials and/or hazardous wastes;
- c. Summaries of all problems or potential problems encountered during the reporting period; and
- d. Certification that the Work Plan has been fully implemented.

Each month, Asarco submits certified progress reports to EPA, which discuss the actions taken by Asarco in achieving compliance with the Decree. These monthly reports will discuss progress in implementing the components of this Work Plan.



REVISIONS				REVISIONS				SCALE VERIFICATION		Project No.: 9006		Hydrometrics, Inc.		ASARCO LLC - EAST HELENA PLANT		DRAWING FILE NUMBER	
NO	BY	DATE	DESCRIPTION	NO	BY	DATE	DESCRIPTION	BAR IS ONE INCH ON ORIGINAL DRAWING	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	DRAWN BY	1/23/09	Consulting Scientists and Engineers	Helena, Montana 59601	2009 WORK PLAN	900601H013	SHEET NUMBER	REV
								0	1	CHECKED BY			3020 Boreman Avenue	CLEANING & DEMOLITION FOOTPRINT	AUTOCAD 2004 DRAWING (DWG)	10	
										APPROVED BY			(406) 443-4150	EXPOSED SOIL SAMPLE AREAS			
										SCALE: AS NOTED							

**2009 CLEANING AND DEMOLITION PROGRAM  
AND  
2009 INTERIM MEASURES WORK PLAN ADDENDUM**

**ASARCO EAST HELENA PLANT**

**APPENDIX C**

**March 2009**

**EXAMPLE INSPECTION FORM**